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ABSTRACT

This issue contains several articles synthesizing research on effective schools conducted by the Mid-continent Regional Educational Laboratory (McREL). Six "folios," or handouts, intended for dissemination to teachers, review the research and make specific suggestions for teachers on: (1) beginning the school year; (2) time management; (3) discipline; (4) expectations; (5) motivation; and (6) instruction. Another article, "Coaching--A Powerful Strategy for Improving Staff Development and Inservice Education," addresses a technique for increasing teacher-to-teacher collaboration and providing feedback for individual teachers about the effectiveness of their instructional methods. A detailed outline of the Effective School Program conducted by McREL is presented in the final article. (CB)

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- BEGINNING THE SCHOOL YEAR
- TIME MANAGEMENT
- DISCIPLINE
- EXPECTATIONS
- MOTIVATION
- INSTRUCTION
- COACHING

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NOTEWORTHY NOTES

This issue of *Noteworthy* is devoted to information the McREL staff has developed as part of their Effective School Program (ESP). The first six articles are what we call "folio's," i.e., handouts we encourage participants to disseminate to teachers who have not participated in the program. Each of the articles or folios journalistically reviews the research and makes specific suggestions teachers can use. Accompanied by appropriate staff development strategies, these handouts are a useful way to help teachers understand and implement elements of the research on effective schools.

Each of the six folios have been printed separately so that they can accompany a short workshop without overloading someone with too much information. These separate handouts are also available from McREL.

In addition to the folios, this issue of Noteworthy contains an article on technique called "Coaching." This technique represents a powerful addition to the staff development repertoire. It is fashioned to increase teacher-to-teacher collaboration and feedback for individual teachers about the effectiveness of their instructional methods. We urge school principals or group of teachers to try the system. If properly introduced and supported, it will make a significant difference in the successful implementation of other efforts to improve schools.

Finally, we have printed a detailed outline of the Effective School Program, itself. Many people want to know more about the program and we thought this would be one way to meet that interest.

If you or your school would be interested in learning even more about it, contact us.

McREL continues to stand ready to help state departments, intermediate agencies, professional associations, school districts, principals, teachers and parents learn about and use research and development to improve education. If we can help you, please let us know.

C. Larry Hutchins
Executive Director

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This issue of *Noteworthy* is dedicated to Lochran C. Nixon, Jr. At his death in September of 1983 he was the Executive Director of the Mid-continent Regional Educational Laboratory (McREL). "Nick," as he was known to his colleagues, had been with McREL since 1969, serving first as Deputy Director and then as Executive Director. He was known to his co-workers as a gentle, sincere and highly principled man. He was devoted to the mission of educational improvement and the role of research and development in the improvement process. He held the regional laboratory together through its most trying times, helping it to emerge as a strong institution serving schools and colleges across the country.

His doctorate was from Auburn University, not far from his home town. Prior to coming to McREL he had served as Superintendent of the North Brevard, Florida School District (adjacent to Cape Canaveral) and as an Assistant Professor at Auburn.

"Nick" was best known to his wife, Gloria, and his daughters Kelly and Kimberly; to them he was a dedicated husband and father. He had strong faith in his family and church, where he enjoyed singing and discussing theology.

He is missed.

C. Larry Hutchins
Executive Director, McREL

Beginning the School Year

Recent educational research indicates that the way a teacher begins the school year is crucial to student success. (See the Research Reports section of this document for a description of some of the major studies on beginning the school year.) A well-run first few days actually can trigger higher levels of student achievement through the end of the year, and a poorly run beginning may set the stage for lowered achievement.

Why? Because an effective beginning:

- ensures that students know and observe the rules and procedures for their classroom so they stay on task. They understand what they are supposed to be doing;
- teaches students how to behave—as a result less time is lost to disciplinary activities;
- motivates students by indicating that their school experiences will be pleasant and that they will be treated fairly; and,
- increases students' expectations by helping them believe they can be successful.

What must a teacher do to take advantage of these research-based findings about the beginning of the school year?

1. Be Clear

- Make sure your building has clearly expressed rules that facilitate learning; these rules should be systematically taught and enforced. The consequences of violating the rules should be clear and uniformly applied. (See the box on the back page and the McREL Quality Schools Program folio on Discipline for more suggestions on setting up rules.)
- Identify all the "standard operating procedures" you use to organize and manage your classroom. (See the Beginning the School Year Checklist on the inside pages.) All rules and standard operating procedures should be taught to the students—starting with those rules most likely to increase student engagement.

2. Be Firm

- Be sure everyone is taught the rules. Check for understanding.
- Also be sure that compliance with the rules and standard operating procedures is monitored closely the first few days and weeks. Ignore no infractions. Uniformly and fairly apply the sanctions for failure to comply. (It's easy to let up later; hard to get tougher.)

3. Be Friendly

- Make the school a pleasant place to be. No one wants to go to a place that's unpleasant and unsupportive.
- Introduce some activities that are fun the first few days; this helps motivate students.
- Recognize the students' needs—for exercise, breaks, and for getting acquainted with one another and with you.

4. Be Positive

- Get across the idea to your students that they will be successful in your classroom; tell them you expect everyone to be successful and that you're there to help them succeed.
- Avoid situations in which failure is likely—heavy duty diagnostic tests, or oral quizzes that too quickly let only the top kids succeed.
- Talk about the "multiple abilities" they will need to be successful in your classroom (See the McREL Quality Schools Program folio on Instruction for more information.)
- Arrange activities at which they all can be winners.

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McREL is a public, non-profit organization, funded in part by contracts and grants from the National Institute of Education (NIE). The McREL staff members who contributed to this folio are: C.L. Hutchins, Susan Everson, Robert Ewy, Susan Lynch and Barbara Kessler. Other contributors include: Linda Shalaway.

RESEARCH REPORTS

Before School Starts

In extensive work at the University of Texas Research and Development Center for Teacher Education, Carolyn Evertson, Edmund Emmer, Linda Anderson, and their colleagues observed elementary and junior high school classrooms during the first days and weeks of school, and at periodic intervals thereafter. They reported that prior to the start of school, effective teachers:

- developed a list of rules, procedures, and routines for students;
- decided upon consequences for breaking rules and procedures; and
- arranged classroom space and materials to suit their instructional needs.

A study at the Institute for Research on Teaching at Michigan State University showed that elementary teachers typically begin planning for the next school year ten days before school starts. Chris Clark and his colleagues reported that during their early planning, teachers:

- made sure they had enough desks and chairs;
- decorated their classrooms with attractive bulletin boards;
- rearranged files and curriculum materials;
- planned seating and furniture arrangements to be consistent with their instructional goals and activities; and
- attended inservice education sessions.

The First Day of School

The old adage, "first impressions count," certainly holds true for classrooms. Students actually experience a form of "imprinting" on opening day, according to Nancy McKee of the University of Texas R&D Center. McKee contends that within the first few hours students pick up on teachers' demands and expectations. Further, a new student will also catch on quickly to the teacher's expectations when he or she enters a classroom already in progress. McKee explains that if classroom activities are flowing smoothly, the student will think that is the normal state; if things are disorganized and chaotic, the student will think that is the norm and will behave accordingly.

In the Texas studies, Evertson, Emmer, and Anderson found that on the first day of school successful teachers:

- established themselves immediately as classroom leaders;
- planned the first day around maximum contact with and control over students;
- gave students interesting activities right away;
- eased students' entry back to school with a relaxed, but work-centered climate;
- planned mostly whole-class activities for the first day or so;
- presented the rules, procedures, and daily classroom routines;
- systematically taught these rules, procedures, and routines and gave students the chance to practice them;
- made sure students understood the consequences for not following rules, procedures, and routines; and
- clearly communicated high expectations for good work and good behavior.

The First Weeks of School

Walter Doyle of North Texas State University has identified a beginning-of-the-year "rhythm" that characterizes elementary and secondary classrooms. As he described it, misbehavior gradually increases at the beginning of the year until a critical point is reached. At this point, if a teacher can successfully handle this early "testing," the incidences of misbehavior decrease and stablize at a much lower level throughout the year. But if a teacher fails to handle misbehavior at this critical point, it will increase in frequency and seriousness; the teacher will lose control of the class. The way to avoid this problem is to spend time teaching routines and rules of conduct during the first few weeks of school and to enforce these rules and routines throughout the year. Teachers who stop misbehavior early have low misbehavior rates all year. Even the amount of off-task behavior in the first weeks of school predicts what will happen during the rest of the year. The key is for teachers to be consistent and predictable in responding to inappropriate behavior, thus students will not continually test them.

The Texas researchers found that during the first few weeks, effective teachers:

- continued to teach rules and procedures;
- consistently enforced rules and procedures;
- continued to communicate their expectations for student work and behavior;
- closely monitored student work and behavior;
- dealt with inappropriate behavior quickly and consistently;
- organized instruction to maximize student success and involvement;
- gave clear, specific directions for activities and assignments; and
- held students accountable for their work.

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Resource Materials

Helping Teachers with Classroom Management: Selected Workshop Activities (R&D Report No. 6051). Julie P. Sanford, Barbara S. Clements, and Edmund T. Emmer. The Classroom Organization and Effective Teaching Project, The Research and Development Center for Teacher Education, The University of Texas at Austin.

The Teacher's Checklist: A "Flight Plan" for Effective Teaching and Classroom Management. Published by the Missouri Department of Elementary and Secondary Education, Arthur L. Mallory, Commissioner of Education, 1981.

What's Noteworthy on School Improvement, Summer, 1981. The Mid-continent Regional Educational Laboratory, Kansas City, MO.

I. Beginning Class
- _____ A. Roll Call, Absentees
- _____ B. Tardy Students
- _____ C. Academic Warm-Ups or Getting Ready Routines
- _____ D. Distributing Materials
- _____ E. Behavior During Class Opening (Elementary)

II. Room/School Areas
- _____ A. Shared Materials
- _____ B. Teacher's Desk
- _____ C. Water Fountain, Bathroom, Pencil Sharpener
- _____ D. Student Storage/Lockers
- _____ E. Student Desks (Elementary)
- _____ F. Learning Centers, Stations (Elementary)
- _____ G. Playground (Elementary)
- _____ H. Lunchroom (Elementary)

III. Setting up Independent Work
- _____ A. Defining Working Alone
- _____ B. Identifying Problems
- _____ C. Identifying Resources
- _____ D. Identifying Solutions
- _____ E. Scheduling
- _____ F. Interim Checkpoints

IV. Instructional Activities
- _____ A. Teacher/Student Contacts
- _____ B. Student Movement in the Room
- _____ C. Signals for Students' Attention
- _____ D. Signals for Teacher's Attention
- _____ E. Student Talk During Seatwork
- _____ F. Activities to Do When Work is Done
- _____ G. Student Participation
- _____ H. Laboratory Procedures
- _____ I. Student Movement in and out of Small Group (Elementary)
- _____ J. Bringing Materials to Group (Elementary)
- _____ K. Expected Behavior in Group (Elementary)
- _____ L. Expected Behavior of Students not in Group (Elementary)

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BEGINNING THE SCHOOL YEAR CHECKLIST

Use this checklist to identify procedures you follow in your classroom. Put a check mark in the space to the left of each item for which you do have a set procedure. Place an asterisk next to those items you do not have procedures for but feel you should. Circle items you feel should be taught on the first day of school.

V. Ending Class
- ____ A. Putting Away Supplies, Equipment
- ____ B. Cleaning Up
- ____ C. Organizing Materials Class
- ____ D. Dismissing Class

VI. Interruptions
- ____ A. Rules
- ____ B. Talk Among Students
- ____ C. Conduct During Interruptions or Delays
- ____ D. Passing Out Books, Supplies
- ____ E. Turning in Work
- ____ F. Handing Back Assignments
- ____ G. Getting Back Assignments
- ____ H. Out-of-Seat Policies

VII. Other Procedures
- ____ A. Fire Drills
- ____ B. Lunch Procedures
- ____ C. Student Helpers
- ____ D. Safety Procedures

VIII. Work Requirements
- ____ A. Heading Papers
- ____ B. Use of Pen or Pencil
- ____ C. Writing on Back of Paper
- ____ D. Neatness, Legibility
- ____ E. Incomplete Work
- ____ F. Late Work
- ____ G. Missed Work
- ____ H. Due Dates
- ____ I. Make-up Work
- ____ J. Supplies
- ____ K. Coloring or Drawing on paper (Elementary)
- ____ L. Use of Manuscript or Cursive (Elementary)

IX. Communicating Assignments
- ____ A. Posting Assignments
- ____ B. Orally Giving Assignments
- ____ C. Provision for Absentees
- ____ D. Requirements for Long Term Assignments
- ____ E. Returning Assignments
- ____ F. Homework Assignments

X. Monitoring Student Work
- ____ A. Total In-class Oral Participation
- ____ B. Completion of In-class Assignments
- ____ C. Completion of Homework
- ____ D. Completion of Stages of Long-term Assignments
- ____ E. Monitoring All Students

XI. Checking Assignments in Class
- ____ A. Students Exchanging Papers
- ____ B. Marking and Grading Assignments
- ____ C. Turning in Assignments
- ____ D. Students Correcting Errors

XII. Grading Procedures
- ____ A. Determining Report Card Grades
- ____ B. Recording Grades
- ____ C. Grading Stages of Long Term Assignments
- ____ D. Extra Credit Work
- ____ E. Keeping Records of Papers/ Grades/Assignments
- ____ F. Grading Criteria
- ____ G. Contracting with Students for Grades

XIII. Academic Feedback
- ____ A. Rewards and Incentives
- ____ B. Posting Student Work
- ____ C. Communicating with Parents
- ____ D. Students' Record of Grades
- ____ E. Written Comments on Assignments

TIPS FOR TEACHERS

Before Opening Day

- Do your homework—read your policy manual and reacquaint yourself with the rules and procedures of your school: opening and closing hours, attendance policies, fire drill routines, evacuation procedures, cafeteria rules, etc.
- Send a letter home with students and parents at preregistration that includes the school phone number, your phone number, conference hours, lunch procedures, and other important information.
- Prepare first day plans and materials. Know the instructional objectives for your school and your grade or class. Review the curriculum guides and the textbook series you will be using. Prepare to make the first day a real day of school; prepare written lesson plans and have the necessary materials ready for students to use.
- Plan to start with a fairly traditional physical classroom setup and a temporary seating chart. This will help you learn students' names and see how your room will "work" when the tables and chairs are occupied.
- Have all classroom materials stored out of the way of traffic areas.
- Provide space for students to store their belongings.
- Add a personal touch to your room with plants, bulletin board decor, posters, etc. Make the room a pleasant place to be.
- Develop a signaling system to call attention to the importance of following procedures. For example, you could use the hand-signal "T" to indicate that a student isn't spending his or her time wisely and should get back on task. You might have students leave messages in a box on your desk to identify things they want help with. You can set up a system for when you expect silence, and when you will tolerate "quiet"—such as whispering.
- Prepare a list of materials that students are expected to bring to each class period.
- Plan procedures for handling new students.
- Plan the beginning and ending of class periods.
- Develop procedures for distributing instructional materials and supplies at the beginning of class periods and for collecting them at the end of class periods.
- Set procedures for laboratory class periods (cleanup of work areas or equipment, safety routines, distributing supplies and materials).
- Set procedures for handling homework assignments.

The First Day

- Arrive early so you will have time to greet your colleagues and students who arrive early. You should be in your room before students arrive.
- Greet students with a smile. Have your name on the board so that students can learn to pronounce and spell it immediately.
- Be in control as soon as the first children enter the room; if they don't all come in at once, have some activities ready that will keep early students busy—such as writing a story or drawing a picture about what they did during the summer, some of their favorite things to do, or something about themselves to help you get to know them better.
- Insist that students be seated when they arrive. You need to establish a good working climate as soon as possible.
- Review your main tasks. You need to establish a well-disciplined classroom in which you have the attention of students, help them establish good work habits, and work with groups as well as individuals.
- Check attendance, having each student raise his or her hand as his or her name is called.
- Conduct a get-acquainted exercise.
- Keep beginning academic exercises brief and pleasant, but get the routine of the day started.
- State classroom rules and procedures positively and begin giving students opportunities to practice them.
- Post classroom rules for all students to see.
- Teach daily routines, such as warm-up and end-of-day exercises, and procedures for moving from one activity to another.
- Don't rush into heavy academics the first day or two. Encourage students by reviewing things they know and complimenting them for knowing so much; when academics are introduced, choose activities that will enable students to succeed.
- Maintain maximum contact with and control over your students; be "ever-present," monitoring and watching.
- Handle behavior problems/disruptions promptly.
- Set up a "buddy" system for learning the rules for students who arrive late. As new students enter the room, a student who has learned the rules will be assigned to teach the rules to the newcomer. This will provide added incentive for students to learn the rules.

The First Few Weeks

- Study the records of your students. You need to know more about their characteristics, achievements, capabilities, and problems.
- Take advantage of every opportunity to meet with parents. Try to make sure they understand your goals and expectations for students. Don't let your first contact with parents be in connection with a negative incident. Respond to parents' questions quickly and honestly and suggest ways they can help with students' assignments.
- Keep a folder for every student and record plenty of observations and grades. Make sure you have enough information to assess each student's ability and effort fairly.
- Continue to explain, re-teach, and enforce rules and procedures.
- Start classes on time.
- Always be prepared; there is no substitute for preparation. Try to think of ways to work with various groups of students (advanced students, low achievers) ahead of time so they won't be left out or monopolize your attention in class.
- Motivate and challenge students with unusual projects and activities.
- Hold students accountable for their work.
- Never leave the classroom when students are present.

TIPS FOR ADMINISTRATORS

One of the most important leadership tasks for the principal is to get school off to a good start each year. Here are a few suggestions to help with that task:

- Work with your faculty and staff to establish and/or remind them that the building has a set of clearly defined rules that are to be enforced by all.
- Each year be sure to tell or remind all teachers why their beginning school year activities are so important (use this document to help with this task).
- Ask the teachers to go over the standard operating procedures they use in their classrooms (see the checklist inside) and decide which ones should be taught on the first day of school or within the first week.
- Discuss the steps necessary in teaching the rules and standard operating procedures; that is: 1) explain the rules, 2) model situations when the rules are followed and are broken, 3) check for understanding, 4) provide for guided practice and corrective feedback, and 5) explain the consequences of breaking the rules.
- Create the expectation that the rules and standard operating procedures will be top priority for all teachers on the first day and during the first week of school.

Parents often accompany their child to school on the first day. This creates a special problem for the school that is trying to create a very orderly environment on the first day of school. The parents feel obliged to talk with the teachers and vice versa—which disrupts the control the teacher needs to exert for the first few hours.

One solution to this problem is to give arriving parents a "back-to-school kit." The kit should include:

- A letter of welcome from you, expressing your pleasure in their interest in the school. This letter may also be used to explain what your beginning-the-school-year focus is and why it is so important to teach the rules and standard operating procedures during early contact with the students.
- A form that the parents can use to write out special instructions regarding their child. Let them know they are welcome to make an appointment with you or their child's teacher to discuss any special concerns or to observe their child's classroom.
- A schedule indicating the best time for them to make medical appointments for their children so they won't interfere with peak learning times.
- A list of the rules for the building and for each classroom and an explanation of the support you need from parents to help enforce the rules.

TIPS ON RULES

Having clearly stated, well-enforced rules is key in getting the school year off to a good start. Below are a few tips administrators and teachers can use in setting rules for their school.

- Select only a few rules—neither you or the students will be able to remember a long list.
- Select rules because they establish an orderly environment and contribute to successful learning—as important an issue as gum chewing may be, it probably doesn't significantly impede learning.
- Make the rules as unambiguous as possible; they should be stated behaviorally—"Keep your hands and feet to yourself" is more clear than "no fighting."
- Select only rules that all adults in the building accept and are willing to uniformly enforce—as soon as students figure out there is a double standard they will work to test the limits.

Possible Building Rules

1. Listen carefully and follow the instructions of adults in the building.
2. Keep your hands and feet to yourself.
3. No running or loitering.
4. Respect other people's property and person.
5. Be on time to class and with assignments.
6. Speak only as loudly as necessary.
7. Treat others as you would like to be treated.
8. Display respect for each other and for authority.
9. Laugh *with* anyone, but laugh *at* no one.
10. Every student is responsible for his or her own learning.
11. Do not interfere with people who are working.

Time management has become an important issue in education. For example the phrase "time on task" has been used so frequently, it has become the focus of many school improvement efforts. Time is a resource in short supply in every school, and it is a resource with a great effect on learning. The best materials, the latest equipment, and the newest instructional programs make little difference if students don't have time to learn and teachers don't have time to teach. (The "Research Reports" section of this document briefly describes findings from a few of the studies that have contributed to our understanding of the important role time plays in determining student achievement.)

What can educators do to increase learning time? Lengthen the school day? Lengthen the school year? As desirable as these options might appear, they are costly and pose new problems concerning teaching contracts, professional expectations, facilities management, etc. Another solution is to use more efficiently the time that is already available; research has shown that teachers and administrators can make better use of the school day.

The first steps toward improving time use in schools is to break the school day down into different categories of time. This is important because how you improve your use of time depends on the category of time you want to change. Figure 1 (on page 2) identifies a number of different divisions of school time. (Following are definitions.)

1. *School Day:* The school day is the total amount of time in one day that students are required to be at school. The research literature shows a positive relationship between the length of the school day and student learning.

2. *Absent Time or Time Lost to Absenteeism:* Absent time is the time students are not present during the required hours of the school day. Regular attendance at school is associated with student achievement. Schools lose a considerable number of student-hours to absenteeism. Time that students are suspended should also be taken into account in this category.

3. *Nonacademic Building Time:* This is time scheduled building-wide for activities that are not directly related to learning. These activities include announcements, recess, lunchtime, passing time, and assemblies. The greater the portion of the school day spent on these activities, the less time there is for instruction. Obviously most of these can't be done away with, but the more efficiently they are handled, the more class time teachers have.

4. *Class Time:* When you take away the time lost to nonacademic activities and absenteeism, the time remaining is class time: the time we give teachers to teach. This time should equal the combined amount of time assigned to specific subjects, but because assigned time is often lost to transitions between subjects and management activities, often it doesn't. (Assigned time would be a subdivision of class time, i.e., the class time allowed for each subject studied.)

5. *Nonacademic Class Time:* During the time teachers have students in their classrooms there is still the potential for considerable lost time due to taking roll, passing out materials and supplies, dealing with individual students while the rest of the class waits, etc.; this time might be thought of as management time. A second type of nonacademic class time is the time lost to such things as social activities, transitions between lessons, and time that is simply lost to confusion or disorder.

6. *Instructional Time:* The time available for instruction after we subtract class time lost to nonacademic activities and absent time could be called instructional time. Some research studies suggest that this instructional time may be as low as 40-60% of the school day.

7. *Nonengaged Time:* Even if the teacher is teaching or intends for the students to work, some students may not be paying attention or doing what they are

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supposed to be doing. Obviously, when this happens, no academic learning is taking place.

8. *Engaged Time or Time on Task:* The portion of instructional time during which students are actively attending to the work the teacher has assigned is called time on task. When this time is looked upon as a percentage of the available day, it represents the school's academic efficiency. (McREL has a procedure for estimating academic efficiency; contact McREL for further information.)

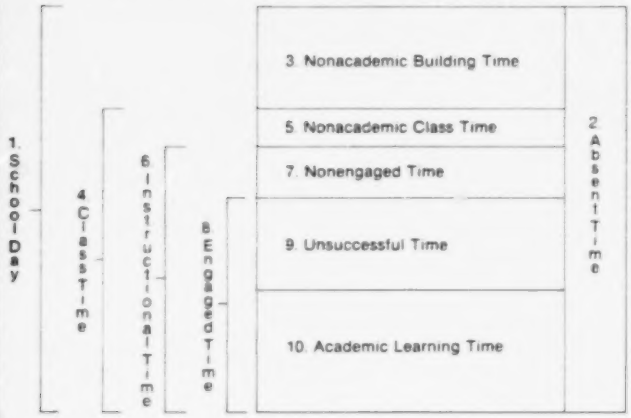

Figure 1.

9. *Unsuccessful Time:* Even when they are engaged students may not be learning because they are not successful at what they are doing. Causes of failure may include materials that are inappropriate to student need, students not having mastered the skills prerequisite to learning a concept, tasks that are not understood, and tasks which can be completed without mastering the essential skills or knowledge; students may also seem to be succeeding, but are actually faking their way through the task by copying from a neighbor, etc.

10. *Academic Learning Time (ALT):* Academic Learning Time is the assigned time in which the student is actively engaged in the instructional task and is appropriately successful, between 60-90% of the time, working on an activity which is tied to a stated learning outcome. Research suggests that for students to achieve, a relatively high proportion of their engaged time must result in success. (See the McREL Quality Schools Program folio *Instruction* for more information on success rate.)

11. *The School Year:* The length of the school year may be calculated by multiplying any one of the positive (black) divisions of time listed above by the number of full days that school is in session; calculating "full days" should allow for days on which there are early dismissals for inservice activities or for days when students are excused for extracurricular activities. For example, one way to calculate the length of the school year would be to multiply a building's daily engaged rate (or time on task) by the number of full days that students are in attendance. (You may be surprised how short the school year is in this case.) Another estimate of the school year would be reached by multiplying the daily instructional time by the number of full student days. Calculating the length of the school year in any of these ways is particularly helpful in comparing the usefulness or potential import of different strategies for using time more efficiently.

Increasing Time for Teaching and Learning

Given all the various ways time is lost and used, what can teachers and administrators do to ensure that there is time to teach and that students have time to learn?

First, determine which of the 11 divisions of time your school wants to work on. The important thing to remember is that you can increase the school day, class time, instructional time, time on task, and academic learning time by shrinking the time lost to any of the other types of time.

This folio will focus on strategies for increasing class time. Other McREL Quality Schools Program folios, *Beginning the School Year, Motivation, Discipline* and *Instruction* provide suggestions for handling engaged time and academic learning time.

Increasing the School Day – The Four Day Week. Many recommendations have been made to lengthen the school day. Whether this is feasible depends on a number of considerations, including the availability of money and the nature of teacher contracts. One innovative way of lengthening the day without necessarily increasing the total time available during the week is to work a longer day but a shorter week – i.e., a four day school week. This arrangement has been tried in a number of communities – usually with positive effects. One by-product of this arrangement has been the reduction of a variety of nonacademic building interruptions achieved by scheduling athletic and extracurricular activities on the fifth day. Schools that have tried this approach have reported declines in absenteeism (both student and staff) as well as student achievement gains.

One important finding about the four-day school week program has been the report that the lengthened day does not seem to be dysfunctional for young children, i.e., kindergarteners and first graders; they seem unaffected by the longer day. (See the Winter, 1982 issue of *Noteworthy* for a report on how the four-day school week is being used in Colorado.)

Increasing the School Day – Homework. Time students spend at home, working on their academic assignments, clearly can add to the amount of time engaged in learning. Many schools are developing homework policies to increase the length of the effective school day. The only caution that should be expressed relates to the issue of success: if students are not successful at what they are doing, i.e., if homework is frustrating or confusing, the risk is that the effort will be dysfunctional. For example, many students easily give up when they are frustrated by an assignment; such an experience can add measurably to their sense of low esteem and failure. In the long run, this

effect retards rather than advances learning. It is, therefore, important that the assignment given as homework, especially to low achieving students, be thoroughly explained and a period of guided practice and feedback with the work precede the take-home assignment. The frequent practice of assigning work the teacher did not have time to cover in class could be quite counterproductive for most students. New work might be appropriate for high achievers; it could be the challenge these students need to avoid the boredom of repetitious, dull work that they already do successfully. To a high achieving student, working a hundred homework problems that he or she already knows how to do well and rapidly could prove as dysfunctional an assignment as a confusing problem would be to a low achieving student.

Increasing the School Day by Reducing Absent Time. More time in the school day may also be gained by reducing absent time. There are many strategies for reducing the time lost to student absences. The following strategies are summarized from a pilot study of 28 California school districts sponsored by the California State Department of Education.

1) School-to-home contact
   - Include articles on the importance of regular school attendance in parent newsletters or on food service menus; use back-to-school nights, P.T.A. meetings, and all other available opportunities to emphasize the importance of attendance.
   - Place responsibility for attendance on parents and students; develop a brochure that summarizes attendance laws and requirements and send it and other attendance materials home with students.
   - Teachers should emphasize the importance of regular school attendance when they meet with parents.
   - Telephone parents/guardians immediately to verify student absences and to determine the reasons for the absence as soon as the absence is noted in the morning. Use parent volunteers or school aides to contact parents/guardians; develop a standardized format for telephone calls to help volunteers and aides efficiently complete the calls. Use bilingual aides to contact parents/guardians with limited English-speaking ability. New computer controlled telephone systems are available for delivering recorded messages to all parents of absent or tardy students.
   - Make home visits concerning student absences if parents/guardians cannot be contacted by telephone.
   - Send warning letters to students and parents when student has been absent a specific number of times (excused or unexcused absences).
2) Rewards for good attendance
   - Award T-shirts or attendance certificates or commendation letters for perfect or high attendance.
   - Hang banners or give special parties for classrooms with the highest quarterly or monthly attendance.
   - Allow perfect attenders to opt out of one final exam of their choice (final grade would then be based on classwork to date).
   - Publicize perfect attendance awards in the local newspaper.
   - Develop a relationship with local merchants (e.g., fast food restaurants, amusement parks, etc.) so you can award their services as prizes for near perfect attendance.
3) Developmental strategies
   - Review student attendance records on a weekly basis to catch emerging absence patterns; refer students with frequent absences to a counselor, administrator, or school social worker to determine reasons for absences and tardies.
   - Provide guidance and counseling for truants; provide tutoring to help them achieve in school.
   - Identify attendance problems early; use guidance personnel in elementary schools.
   - Set up an "open classroom" program in which a diversified and meaningful school environment is designed to help students become self-motivated learners responsible for their own behavior.
   - Provide Saturday school programs or late afternoon classes (3-6 p.m.) for students who cannot attend full-day classes.
   - Expand student electives and options to include work experience, independent study, continuation and alternative schools, and opportunities for non-traditional experiences.
4) Consequences for poor attendance
   - Clarify school standards related to attendance. Involve parents, students and school staff in developing policies that specify expectations and delineate outcomes of good-vs.-poor attendance. Publicize the policies and enforce them consistently.
   - Encourage teachers to include classroom participation in their grading criteria.
   - Initiate an in-house suspension program; use a "no-frill" room on campus; you might establish a time schedule for this program that does not correspond to the usual school schedule.
5) Staff Development
   - Display attendance graphs in the faculty room to show attendance comparisons between current and past school years.
   - Provide homeroom teachers with prepared lesson on school attendance.
   - Review studies on attendance, truancy, dropouts, and alternatives to suspension and report findings to staff members.
   - Provide staff development in discipline, communications training, "crisis counseling," and behavior modification strategies.
6) Cooperative community efforts
   - Increase efforts to create public awareness of attendance problems in the community through newspaper articles and public service announcements on radio and television.
   - Elicit the cooperation of doctors, dentists, and other allied health professionals in scheduling appointments after school. (As will be discussed later, teachers and principals working together can

set up staggered blocks of "academic learning time" and inform parents that these blocks of time are periods during which they would rather medical or other appointments not be scheduled. Most parents will cooperate; they are pleased to have timelines for scheduling appointments).

- Set up a telephone hotline in the school district attendance office which allows community residents to anonymously report apparent truants; recruit senior citizen volunteers to monitor the phone lines; include the hotline number on phone number stickers distributed to community residences with police, fire, and other emergency numbers.
- Develop an attendance improvement plan in cooperation with local agencies, police, probation departments.

Increasing Class Time by Reducing Nonacademic Building Time. Nonacademic building activities, though important, often cut unnecessarily into class time. Teachers are sensitive to the activities that cause them to lose time. At a staff meeting, get teachers (and principals) to identify the time lost to building interruptions and brainstorm strategies for reducing lost time. Here are some suggestions:

- Use T.V. screens or paper handouts for announcements instead of the loudspeaker system. If loudspeaker announcements must be made, schedule them during lunch hour or at a set time that does not cut into a particular class period.
- Obviously students need time to eat, but lengthy lunch hours can cut valuable class time. Observe students during their lunch hours and determine the amount of lunch time needed that provides a balance between the "gulpers" and the "dawdlers."
- Disruptions that result from student pull-outs for special classes or counseling are another source of lost time. One way to handle pull-outs more efficiently is for the principal and teachers (rather than the district staff or the visiting teacher) to determine the least disruptive times for pull-outs to occur, and schedule solid blocks of uninterrupted time for teachers. This practice, of course, will require the cooperation of special, traveling teachers such as those in special education and music programs. Such cooperation would involve having the principal check with the central office to be sure the people there know that he or she understands that these traveling teachers can only come on specific days. The principal would request that he or she be allowed to schedule the order and times that the visiting teacher(s) or resource people see specific children so that each teacher could be given a block of interrupted time. For example, the first grade teacher might have 9:00-10:30 uninterrupted, her "special children" would be pulled out before or after this block of time; the second grade teacher would have 9:15-10:45 uninterrupted; etc. The teacher then always knows when his or her time will be uninterrupted and can schedule the most important learning activities during that time. To reduce chance interruptions during these time blocks some schools have hung McREL's "Do Not Disturb, Academic Learning Time in Progress" signs from classroom doorknobs. It is important to let parents know what time their students will be scheduled for uninterrupted time so they will not make medical or dental appointments or classroom visits during this block; most parents welcome this information and will cooperate. It also helps neighborhood medical offices since it automatically staggers appointments out over the day.
- Reduce the time students spend moving from one class to another. This requires school-wide scheduling changes and cooperation. Some schools, for example, have combined 30-minute, three-times-a-week physical education and remedial classes into two 45-minute classes. These and other similar changes cut "travel time" by up to 50 percent and also reduce time-consuming interruptions caused by students going in and out of classrooms.
- Activities such as bathroom breaks also may consume much more time than necessary. One school working with McREL realized an instructional time savings of 20-24 minutes daily simply by scheduling students two at a time to take bathroom breaks at intervals of three minutes, rather than sending the entire class to the bathroom at one time.

Increasing Class Time by Reducing Nonacademic Class Time. Teachers can contribute to increasing their class time by using the following strategies to shrink time lost to nonacademic activities.

- Keep time-consuming behavior problems to a minimum. Available instructional time is increased in classrooms in which the teacher firmly establishes and communicates classroom rules during the first days of school and maintains them throughout the year. (The McREL Quality Schools Program folio *Beginning the School Year* includes strategies for establishing a well-managed classroom, suggestions about school rules, and a checklist of standard operating procedures for the classroom.)
- Enforce classroom rules uniformly; be sure students are aware of the consequences of not following the rules.
- Teach students the importance of on-task behavior.
- Make sure your students know and follow the standard operating procedures for your classroom (for example, how to get your attention if they need help, the procedure for handing in assignments, etc.).
- Have lessons well-planned; always be prepared. Preparation can significantly reduce time lost to student confusion.
- Reduce transition time between activities and lessons. Established routines for sharpening pencils, taking out books and materials, and otherwise "getting ready" can help keep transitions brief.

Increasing Instructional Time. The McREL Quality Schools Program folio, *Instruction*, offers strategies for effective instruction and for increasing engaged time and ALT; however, below are listed some suggestions on increasing the amount of instruction within your instructional time.

- Set a faster lesson pace. The faster the pace, the more content covered, and thus students have more of an

opportunity to learn. There are limits, of course, but many teachers underestimate the pace students can follow. A faster pace also keeps students challenged and involved.

- Use "sponges": self-instructional activities designed to use spare minutes between lessons, or before class is dismissed.
- Integrate or combine subjects into multi-purpose lessons. Have students write a science report or read an account of an historical event.
- Decrease the time allotted for breaks and social activities. Contrary to popular belief, students do not need a lot of "break time" to refresh themselves. In fact, long and/or frequent breaks actually lower student involvement in academic work.

Research Reports

The Beginning Teacher Evaluation Study (BTES) sponsored by Far West Laboratory documented that about 60% of the elementary school day was devoted to academic activities, about 23% was devoted to nonacademic activities, and about 17% of the day was spent in noninstructional activities.

The BTES researchers also found:

- The amount of time that teachers allocate to instruction in a particular curriculum area is positively associated with student learning in that content area.
- Allocated time varied enormously between one teacher and another and between one school and another. For example, during one year BTES found one class that spent 350 minutes on reading comprehension; another spent 3000 minutes on the same subject. One teacher spent very little time on silent reading; another spent 3640 minutes. Similar examples can be found in mathematics: one teacher spent nine minutes on money during an entire year – would you want that child making change for you? One teacher spent 29 minutes on linear measurement; another spent 400. It would not be surprising if the students who received 400 minutes of measurement instruction learned more than those who received 29 minutes.
- More substantive interaction between the student and an instructor is associated with higher levels of student engagement.
- Increased instructional time does not decrease student involvement or result in negative attitudes toward learning or school.
- Engagement rates vary widely across classrooms, ranging from as low as 10% in some classrooms to 90% in others.
- Combining engagement rates with time actually allocated shows that students are engaged in learning from 28-50% of the time.
- High success rates increase student engagement. Time on task is highest when students are given tasks that are appropriately difficult – tasks that allow them to succeed 60-90% of the time.
- The proportion of allocated time that students are engaged is positively associated with learning.
- Student engaged time in reading or mathematics is usually greater in formal (structured) settings.
- Engagement does not decrease with increased time allocations. BTES teachers who had the most time allocated to academic content also had the highest engagement rates.
- Engagement is lowest during independent seatwork. Students are more involved in teacher-led settings (84% of the time) than when they are doing seatwork (70% of the time). Yet 70% of class time is spent doing seatwork.
- Student engagement in seatwork materials is especially low in mathematics.
- Increased interaction with the teacher during seatwork tends to increase engagement.
- A learning environment characterized by student responsibility for academic work and by cooperation on academic tasks is associated with higher achievement.
- Increases in academic learning time (ALT) are not associated with more negative attitudes toward mathematics, reading, or school.
- The teacher's accuracy in diagnosing student skill levels is related to student achievement and academic learning time.
- The teacher's prescription of appropriate tasks is related to student achievement and student success rate.
- The proportion of time that reading or mathematics tasks are performed with high success is positively associated with student learning.
- The teacher's value system is related to academic learning time and to student achievement. Teacher emphasis on academic goals is positively associated with student learning.

District researchers in Austin, Texas followed 227 students through an entire school day. Some of their findings about time are listed below.

- More than 20% of the students' time was spent in noninstructional activities. Further, subtracting lunch and recess times, they discovered that only three and three-quarter hours – about 60% of the day – was left for instruction.
- Instructional time could be increased without adding hours to the school day. With improved classroom management, students received from 23 to 34 more minutes of instructional time per day.
- Increased instructional time correlated with higher test scores in math and reading.

A study by Michigan State University's Institute for Research on Teaching found:

- Between 27-42% of the elementary school day is spent in noninstructional activity. Students in classrooms with the most noninstructional activities received the equivalent of five and one-half weeks less instruction than did other classes – during the same number of days.
- Direct instruction for all subjects in the classrooms observed ranged from 84 to 200 minutes per day, with the average being about 100 minutes per day.
- Some students are assigned more seatwork and receive less direct instruction than their classmates.

- In a re-analysis of BTES data, IRT researchers found that students of lower socioeconomic status received less direct instruction.

Other research findings include:

- Teacher time spent working with one or two students while others wait is negatively related to class engagement and achievement; however, time spent working with small or large groups is positively related (Stallings and Kaskowitz).
- Students working in small groups without supervision are less engaged and achieve less (Soar).
- Student choice in activities, in seating arrangement, and free work groups are all associated with less engagement and learning (Soar, Solomon, and Kendall).
- The more time teachers spend in direct instruction, the more time students are actively engaged in academic tasks (Talmage and Rasher).

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Interruptions, Cancellations, Delays, and Depletions: Teachers Need Time to Teach

Helen C. Vo-Dinh, a high school English teacher, voiced her concern in *Newsweek* magazine (August 15, 1983) about the loss of instructional time to nonacademic activities, particularly at the secondary level.

Of the 180 mandated school attendance days in her state, Ms. Vo-Dinh says, "If I consider only the classes I lose to 'necessities' such as fire drills, bomb scares, three days of state-mandated testing, three days of registration and one entire day for school photos, my students have already missed 10 periods out of the 180." There are literally dozens of school-sanctioned activities for which her students miss class, either one by one or en masse, such as club trips, sports activities or practice, pep rallies, science day, cattle judging, club meetings, student government functions, assemblies, appointments with guidance counselors or Army representatives, music or drama rehearsals, art shows, bloodmobile, student council or homecoming elections, PSATs; the list is seemingly endless.

Clearly, extracurricular activities can enrich a student's education, but as Ms. Vo-Dinh points out, there is no pressing reason why they need to take place during school hours, particularly when this sort of scheduling sacrifices valuable instructional time. Some students can read and complete assignments outside of class, copy notes from friends, and keep up with their work; others may settle for lower grades. Much of what takes place in class, however, cannot be made up – for example, class discussions which give students the opportunity to test and clarify ideas on a subject. Administrators need to be aware of the draining effect extracurricular activities can have on academic effectiveness and schedule them accordingly, i.e., before or after school hours. "At the very least," says Ms. Vo-Dinh, "we would then discover which students wanted to participate in activities and which simply wished to escape from class."

Ms. Vo-Dinh concludes by suggesting that teachers be given a fair chance to educate students. "Guarantee me those 180 periods I'm supposed to have. I'll know the public and the people who run the schools are serious about improving them the year my classes have not been shortened, delayed, canceled, interrupted or depleted for any reason short of illness, an emergency or the Second Coming."

Discipline

Over the past ten years, Americans who have responded to opinion polls have named poor discipline as the number one problem plaguing American schools. The public believes good discipline is a "law and order" stance educators should take to reduce or eliminate the physical violence, vandalism, and disrespect shown by students that many believe is pervasive in the schools.

Schools do have discipline problems. However, the discipline problems schools most often handle are actually much less serious than those that concern the public. Such student misconduct as truancy, heckling, failure to complete assignments, and unwillingness to participate may seem minor, but they waste valuable instructional time and interfere with learning.

How can discipline problems be solved? Research shows that the often-advocated crackdowns on misbehavior, "get-tough" attitudes, and harsh punishment do little to solve the problems. A positive learning environment can go much farther towards reducing behavior problems and helping students learn. (See the Research Reports section of this document for descriptions of some of the research about school discipline.) Good discipline is a process to be taught; it is not synonymous with punishment. Effective teachers teach students the value of following reasonable rules and help them understand the purposes for rules. One of education's goals is to teach students self-discipline and responsibility, and like all effective lessons, teachers teach students self-discipline and responsibility through well-planned instruction.

Tips for Teachers and Administrators: Preventing Discipline Problems

In schools with effective discipline, students learn that discipline is the responsibility of everyone in the school. The effective schools research reveals that certain school characteristics, teacher characteristics, and classroom characteristics contribute to effective discipline. These characteristics are described below.

School Characteristics

The faculty and staff of schools with good discipline exhibit the following actions, attitudes, and knowledge:

- they ensure that school rules are stated clearly, positively, and in behavioral terms;
- they enforce the rules uniformly;
- their behavior is a model for students to use in following the rules;
- they get students involved in making the school rules;
- they expect students to succeed at following the school rules;
- they teach the rules to students with the same care and clarity they use to teach their content-area lessons, and they provide opportunities for students to learn, practice, and successfully follow the school rules;
- they understand the factors that might contribute to truancy, excessive absenteeism, tardiness, fighting, cheating, aggressiveness and failure to complete assignments; for example, student fighting may be caused by overcrowded school conditions; aggressive or withdrawn behavior may be the result of previous academic failure that causes students to want to distract attention from their failures or to withdraw from anticipated failure;
- they focus on rewarding rather than punishing behaviors;
- they help students feel better about themselves; and
- they maintain the support and confidence of everyone in the school.

Teacher Characteristics

Effective teachers foster students' self-concepts, and hold high expectations for their students' academic success.

They also use encouragement and kind words more than rebukes and reprimands. They know that sarcasm, ridicule, and verbal abuse are counterproductive in disciplining students because such remarks damage students' self-esteem and reinforce any low opinions students have of themselves. Effective teachers use discipline techniques that focus on improving students' self-images and responsibility by:

- avoiding win-lose conflicts using problem-solving activities rather than resorting to blame or ridicule;
- remaining calm and courteous in the face of hostility or conflict;

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- earning students' respect by showing that they care about them and their problems;
- being consistent with all students in what they say and do;
- following through on their commitments;
- exercising self-control and avoiding nagging, sarcasm, and bias;
- establishing rapport with students;
- treating students with respect and politeness;
- keeping communication open by being attentive listeners and clarifying students' comments; and
- using "I" messages to discuss problem behavior by stating how it makes the teachers feel.

Teachers with high expectations understand the link between problem behavior and failure in school. Discipline and instruction are closely related. Repeated academic failures cause students to feel frustrated and may cause them to stop trying altogether; such students may act out with anger and hostility. Students need to succeed and teachers need to give them the opportunity to do so. Effective teachers:

- hold high expectations for all students;
- allow students to succeed by assigning schoolwork they can handle;
- direct activities in the classroom by being an authoritative leader;
- model the kind of behavior they expect from students;
- establish the rules for behavior and find solutions to problems with the students;
- specifically describe inappropriate behaviors to students; and
- help students understand the consequences of misbehavior.

Students also need to feel that they are part of a group or a class. By identifying with a particular group or class, students are satisfying their social, academic, and emotional needs for recognition and attention; thus, they are less likely to misbehave. Teachers with good discipline:

- promote a group identity in the classroom by arranging for cooperative experiences, by discouraging competitive cliques, and by being careful not to favor certain students; and
- are aware of cultural differences. Averted eyes may be defiant behavior in one culture, but a sign of respect in another culture.

Classroom Characteristics

The research on effective instruction and classroom climate shows that minimizing classroom behavior problems leads to maximizing student engaged time and achievement. Planning for instruction can diminish discipline problems. Research studies describe differences between teachers who effectively manage problems and those who do not. One of the differences is that effective teachers devote time to planning for the prevention of misbehavior.

A great many discipline problems can be traced to student boredom and confusion. Effective teachers prevent behavior problems by keeping students engaged. Students don't have time to cause trouble if they are busily involved in their schoolwork. A classroom that is physically arranged to facilitate adherence to rules and procedures also helps to prevent discipline problems. (For example, if a classroom rule is "Keep your hands and feet to yourself," infractions of the rule will be reduced by spacing the classroom desks or tables far enough apart so that all students have enough room to stretch their legs out under their desks.)

Certain instructional strategies help teachers keep students on task and involved so discipline problems are minimized. The teacher who has a clear view of the entire classroom and frequently scans the room practices "withitness;" he or she is constantly aware of what is happening in the classroom, and is ready to detect and handle discipline problems. "Overlapping" is another important strategy. It allows a teacher to manage more than one problem at a time. An example of overlapping is that, while he or she is helping individual students work independently, the teacher also monitors the rest of the class to prevent misbehavior.

In a classroom characterized by few discipline problems, teachers:

- prevent problems by teaching and demonstrating classroom rules and procedures at the beginning of the year and allowing time for students to practice them (See the Quality Schools Program folio, *Beginning the School Year,* for more information.);
- maintain lesson momentum by using a brisk but appropriate pace so students stay attentive and interested;
- establish classroom traffic patterns that avoid bottlenecks, obstacles, and long lines;
- avoid long periods of delay and confusion with smooth, brief transitions betwen lessons and activities;
- monitor the classroom continuously and stay aware of what is occurring in all parts of the room;
- teach students academic survival skills, such as how to pay attention, follow directions, and ask for help;
- teach by design, with well planned lessons and advance preparation of materials;
- avoid labeling or judging students as "bad"—instead, they describe the effects of student behavior as "disruptive," "unacceptable," etc.;
- provide appropriate instruction, reteaching, remedial work, and enrichment for all students;
- give positive feedback that specifically describes the student's accomplishment–improved handwriting, for example–rather than simply writing "good" or "A" at the top of an assignment or giving rewards;
- have emergency plans for rainy days, substitutes, assemblies and schedule changes;
- teach students personal and social skills, such as conversing, listening, helping, and sharing; and
- adopt classroom rules that are consistent with the school rules.

Tips for Teachers: Student Responsibility

In effective classrooms students recognize their responsibility for their own problems and take responsibility for solving them. When students act responsibly, good discipline is maintained. Teachers help students act responsibly by setting limits, letting students make choices, and

providing a list of reasonable consequences for misbehaviors. Many times students aren't aware they are misbehaving; teachers help students assess their behaviors by asking *what* questions rather than *why* questions. (For example, "What did you do?" rather than, "Why did you do it?" Teachers also help students make important value judgments about their own behaviors through questioning ("Is what you're doing helping you?"). Without becoming abusive, effective teachers work positively with students and guide those who have discipline problems in making a commitment to change their behavior.

Research shows that in developing student responsibility in classrooms, teachers:

- set and enforce the limits of acceptable behaviors and hold students accountable for knowing what behaviors are acceptable;
- confront students when they do not stop their disruptive behavior after the teacher has given a simple warning;
- do not let students exceed the acceptable limits of behaviors;
- inform students that it is their choice to continue misbehaving or to stop misbehaving, and make sure they understand that a decision to continue misbehaving results in a specific consequence;
- make sure that consequences are realistic, reasonable, and appropriate for the misbehavior (cleaning up the mess instead of writing an essay on not making a mess);
- concentrate on the present rather than past mistakes;
- accept no excuses for misbehaviors; and
- have students make a commitment to change behaviors (a handshake, verbal agreement, or signed contract).

When students work independently, they also must take responsibility for their own problems, and for their own learning process. (For information and strategies for helping students become independent learners, see the McREL Quality Schools Program folio, *Instruction*.)

Tips for Teachers: Discipline Techniques

Teachers have many options for handling the discipline problems that arise in their classrooms. Some suggestions are as follows:

Behavior Modification

Behavior modification is the process of reinforcing desirable behavior in order to extinguish undesirable behavior. Whether appropriate or inappropriate, random behavioral responses become patterned because they are reinforced in some way. No matter how sophisticated our learning level, we all respond to reinforcement. Reinforcement may be simply defined as consequence that follows a behavior.

There are two types of reinforcers; extrinsic and intrinsic. Extrinsic reinforcers are consequences that follow a behavior that the student considers rewarding but are external to the student and to the behavior being reinforced. Extrinsic reinforcers range from gold stars and candy to free time and grades. Intrinsic reinforcers are consequences that follow directly from the behavior; for example, when completing a task is its own reward, the task completion has been reinforced intrinsically.

There is much debate about the usefulness and even potential dangers of extrinsic motivation. For example, will the desired behavior automatically cease in the absence of external rewards? Another concern raised is that what constitutes a "reward" varies from student to student. What one student finds rewarding may actually be punishment for another. For example, one student may be embarassed by teacher praise and another student may thrive on praise. Extrinsic rewards can make students aware of the powerful social reinforcement given to those who work hard, behave, learn, and succeed: they help teach students how to win this reinforcement. (For a complete discussion of student motivation, see the McREL Quality Schools Program folio, *Motivation*.)

There are several steps teachers can follow to use extrinsic motivators to change student behavior.

Step 1. Document inappropriate behaviors exhibited by a particular student, or group of students. List the behaviors in order of their importance. The most important is behavior that is most harmful to the student or those around him or her (fighting, running in the hallways, stealing, etc.). Next in importance are behaviors that interfere with the student's ability to learn (constant movement around the classroom, talking out of turn, tardiness, truancy, etc.). Learning problems are third in importance, such as not knowing the multiplication tables, not reading at grade level, not knowing how to spell, etc. Listing the behaviors you want to change is important. (Sometimes students change over time and teachers are not as clear as they need to be about what a student's behavior is at the present time.)

Step 2. Gather baseline data to determine the extent of the problem. Whenever possible, determine the frequency of the behavior. For example, observe the student or students and record the number of times the inappropriate behavior occurs in a given time period: a day, a week, and so on. You might also use other data collection techniques: anecdotal observations, test results, records of critical incidents, etc.

Notice the circumstances when the behavior occurs: perhaps the student wanders around the classroom during math because he or she does not understand the work.

Step 3. List positive consequences to be used when the student(s) behaves appropriately. Be sure to identify several, since no single reinforcer is likely to work indefinitely. For example, teachers can use the following strategies to reinforce desired behaviors:

- Use rewards that are not material objects. Reinforcers such as the opportunity to be first in the lunch line or extra library privileges can be quite effective.
- Token systems (students receive points or tokens that can be later exchanged for rewards) are an advanced form of extrinsic motivation which help students learn to delay gratification.
- Contingency contracting can be adapted to most grade levels and involves contracting with students to carry out certain responsibilities in exchange for certain rewards. There is evidence that contracts help students develop self-control and self-management because they see clearly stated consequences of personal choice.
- Teacher praise, if used for reinforcement, should be 1) spontaneous and sincere, 2) adapted to the specific

accomplishment, 3) expresses publicly or privately according to the student's preference, and 4) specific in describing what the student did.

Also list possible negative reinforcers which are appropriate for the student(s). If inappropriate behavior is well established it may be necessary to suppress it (negative reinforcement) while the "new," desirable behavior is being established through positive reinforcement. When extinguishing undesirable behavior, teachers should consider the following:

- Have students use self-instruction, i.e., telling themselves what to do before doing it. For example, impulsive or aggressive students can learn to assume the "turtle position" (head on desk, eyes closed, fist clenched) or to count silently to themselves when they are upset; this gives them time to relax and consider alternatives. Students can also learn to monitor their own actions with checklists, scoring keys, or charts.
- Ignore or minimize some problems. To acknowledge a minor problem sometimes disrupts the flow of activity and causes more disturbance than did the original problem. A glance, a directed question, or moving closer to the disruptive student may be all that is needed to extinguish inappropriate behavior. A teacher can sometimes properly ignore a problem when the problem is 1) brief, 2) not serious or dangerous, or 3) less important than not disrupting the whole class. However, this approach may backfire if the student interprets it as a signal to increase attention-getting efforts.
- Reprimands, when necessary, should be stated quickly and non-disruptively. Otherwise, there is the possibility of a ripple effect, whereby other students side with the misbehaving student.
- Emphasize problem solving instead of punishment. Students are individuals who are capable of solving their own problems and helping others to do so.

Step 4. Set a specific, short-term goal for improvement. Do not expect to extinguish the undesirable behavior immediately. For example, if the student gets out of his or her seat without permission at least five times a day, set your short-term goal to reduce it to two or three times a day. Once you've achieved that goal you can try to get it down to once or twice a day and then to zero. Setting these "successive approximations" of your long range goal will provide a higher probability of success for the student and a lower level of frustration for you. (Now you can see why counting the frequency of the behaviors is important; if you don't know how many times a student is doing "it," you don't know how to set a realistic goal for improvement. If it has been happening ten times a day and the student gets it down to five times, you won't know there's been an improvement unless you've been counting.) Be ready for backsliding. Even the most well-intentioned person reverts to previous behaviors. Don't treat an occasional slip up as a sign the student has failed and the effort is to be abandoned. Simply accept the slip and keep on working.

Be sure to keep records so you can track success. As the desirable behavior becomes more established, ease up on the reinforcement; reinforce every other occurrence, every third occurrence, and so on.

Work with the student(s) to implement these steps. Sometimes students are not aware they have a problem. Let the student(s) know the target behavior and participate in selecting positive and negative reinforcers. Older students are particularly capable of helping develop plans to change their behavior; they can even assist in keeping records to chart their progress.

Punishment

A cautionary note about using punishment: it can be counterproductive to good discipline. Punishment works best in a large, positive context where good behavior is acknowledged and rewarded. Activities that may appear trivial to the teacher may work well as punishments for students. For example, being last in lunch line, sitting in one place rather than another, or being held up just long enough after school to miss out on walking home with friends. Here are some research-based recommendations concerning punishment:

- avoid physical punishment or strong denunciations;
- administer punishment mildly, briefly, and infrequently;
- never punish in the heat of anger;
- include restitution if possible;
- never use school work as punishment;
- make sure students know why punishment is necessary;
- delay punishment until an appropriate time if necessary; and
- never punish the whole group for one individual's misconduct. If you want more information, there are behavior modification books, materials and workshops available to school faculties, e.g. Assertive Discipline.

Glasser's Discipline Model

Because discipline is a teaching process it involves teaching students the value of reasonable rules. If a student cannot follow reasonable rules it is the teacher's job to teach students how as well as why it is to their benefit to follow the rules. One technique to do this comes from William Glasser's Reality Therapy (1975). The following describes Glasser's ten step process for teachers to use.

Step 1. Think about yourself and the student. Ask, "What am I routinely doing with this student?"

Step 2. Then ask, "Are these things working?" If the answer is "No," make a commitment to stop what you have been doing.

Step 3. Make a plan to do something every day with this student that is personal, friendly, and conveys the message, "I care about you." Be persistent even though a long time passes before your student responds favorably. Stay calm and courteous no matter how your student behaves.

Step 4. When a disruption occurs, issue a simple corrective or directive, such as, "Please stop it" or "Please be here on time"–nothing more. Continue Step 3.

Step 5. If Step 4 doesn't work, ask the student to evaluate his or her behavior: "What are you doing?" and "Is what you are doing against the rules?" If he or she denies doing anything, tell him or her what you see him or her doing and state the rule he or she is breaking. Put the responsibility where it belongs–on the student. Don't say anything more–just wait. (If you have trouble getting the student to admit he or she is breaking the rules, keep a tape recorder running in the classroom. Play it back to the

student, or his or her parents, to document the problem. Simply running the tape recorder will help to silence some students.)

If you have been using Steps 1, 2, and 3, the questions in Step 5 are very effective in stopping misbehavior.

Step 6. If the student doesn't stop misbehaving then tell him or her firmly and courteously, "We've got to get together and work it out." Take time to encourage the student to come up with the plan; help if necessary. The plan should be short-term, specific, possible, and involve some form of positive action more than "I'll stop." Get a commitment from the student to follow the plan–shake hands on it, verbalize it, or put it in writing and sign it. It is important in this step to impress upon the student that the problem is going to be worked out. If the plan is not working and the student disrupts again, accept no excuses. Ask him or her, "When are you going to do what you agreed to do in your plan?" Find out what went wrong. If necessary, renegotiate the plan and get a commitment from the student to follow it.

Step 7. If disruption continues, go through Step 6 once or twice. If this doesn't solve the problem, then isolate the student at a time-out location in the room or, if necessary, in the office. (Be careful, the office can be a very interesting place to be sent for some students!) Say to the student, "I want you to sit here until you have a plan that will help you follow the rules or when you are ready to work out a plan with me."

Step 8. Step 8 is in-school suspension. If the student acts up during time-out, then he or she is referred immediately to the principal: "We want you to be in class, but we expect you to follow the rules. As soon as you have a plan that will help you follow the rules, you may return to class. If you need help with your plan, I'll help you." If help with the plan is requested, the principal asks the student, "What did you do?" Then he or she asks, "What plan can you make that will help you do better?" Be prepared for lots of excuses. (Be sure the time-out room is as boring as possible—no pictures, windows, etc.)

Step 9. If a student continues to misbehave, he or she is declared out of control and his or her parents must be notified and asked to take him or her home. However, the principal tells the parents and the student, "Tomorrow is a new day. We would like your child to be with us tomorrow so long as he or she maintains reasonable behavior. If his or her behavior does not remain reasonable we will call you to take him or her home again." When the student returns to school the following day, if he or she misbehaves you go right back to Step 8–in-school suspension –until the student makes a plan to follow the rules.

Step 10. If consistent use of Steps 1 through 9 does not work, then the student must stay home permanently or receive special help provided either by the school district or community agencies.

(For a detailed description of various student behavior problems and step-by-step plans for handling them, see "Handling the Difficult Ones," *"What's Noteworthy on School Improvement,* Summer, 1981. Other resources in Teacher Effectiveness Training by Tom Gordon.)

Research Reports

The Phi Delta Kappa Commission on Discipline investigated discipline by looking at effective schools where discipline was not a significant problem. The Commission found several distinguishing features of schools with effective discipline practices.

- All faculty members and students are involved in problem solving.
- The school is viewed as a place to experience success.
- Problem solving focuses on causes rather than symptoms.
- Emphasis is on positive behaviors and preventive measures.
- The principal is a strong leader.

In an extensive review of classroom research, Jere Brophy and Joyce Putnam of the Institute for Research on Teaching found the following teacher characteristics associated with good class discipline:

- Ego-strength and self-confidence. Teachers with these qualities can listen to student complaints without becoming defensive or authoritarian.
- Positive attitude. If teachers like and respect their students, the students will respond in kind.
- High expectations. Teachers' positive expectations help students perceive themselves as able, valuable, and responsible individuals. They then act that way.
- Authoritative leadership. Authoritative leadership–where the teacher seeks feedback and consensus on decisions and makes sure that decisions and the reasons behind them are well understood–has been shown to be more effective than either authoritarian (where the teacher's decisions are absolute) or laissez-faire (non-directed) leadership.

There is evidence that discipline problems and student alienation are rooted in the very nature of schooling. In citing such school practices as negative labeling of students, tracking, emphasis on competition, and ranking of high school seniors, Eugene Howard of the Colorado Department of Education describes the way that some students get messages early that they are "losers." As a result, those students react with anger and hostility. (For more information, see the article "Improving Discipline Through Unrigging the School," *What's Noteworthy on Discipline,* 1980.)

Some of the anger and hostility can be circumvented by a strong group or class identity. Students who feel they are part of the group are less likely to behave in antisocial ways. Certainly a major feature in the socialization process is identification with a particular group.

Teachers with the best-behaved classes, say Jere Brophy and Joyce Putnam prevent problems by practicing these classroom management strategies:

- lesson materials are always prepared and ready to use;
- lessons are planned to proceed smoothly and at a brisk pace;
- seatwork is appropriately challenging and difficult;
- back-up activities are planned for sudden schedule changes;

- routines, rules, and conduct are stressed early in the year and
- transitions between lessons or activities are brief.

Edmund Emmer and Carolyn Evertson of the Texas Research and Development Center for Teacher Education found that elementary teachers could prevent problems by teaching students how to behave in a classroom. Teachers taught students how to get assistance, contact the teachers, line up, turn in work, and act during seatwork or group activities. Junior high teachers, they found, could prevent problems by setting clear expectations for behavior, academic work, and classroom procedures.

In one study of secondary teachers, researchers found that teachers trained in basic counseling skills could greatly improve students' behavior. The teachers were taught to listen effectively, pay attention to nonverbal cues, and communicate that they understood students' feelings and accepted them as valid.

In a long-term study, Brophy and colleagues at the Institute for Research on Teaching found that problem behaviors can be divided into three categories of ownership:

- Teacher-owned problems are problems which interfere with the teacher's need for authority and control. Aggressive, underachieving, defiant, or immature students become this kind of problem when teachers believe they are acting intentionally to challenge the teacher's authority. As a result, teachers are pessimistic about helping these students change and often resort most to punishment or threatening behaviors when dealing with them.
- Student-owned problems elicit much more sympathy and help from teachers. Examples of students who exhibit these problems are students who are rejected by their peers, are low achievers, or are perfectionists. Teachers do not view these students as acting intentionally, but rather, they see them as victims of their own behavior.
- Teachers are most confident about handling problems owned by both teacher and student. Such problems as hyperactivity, withdrawal, distractibility, and immaturity do not threaten teacher authority, but affect classroom management and control. Teachers believe these students can learn to control their behavior and that their misbehavior is an unintentional act.

Research documents both the pros and cons of behavior modification techniques: On the positive side are reports in an ERIC Research Action Brief on classroom discipline.

- An experiment with high school students showed that teacher praise and grades are not desirable rewards for adolescents. But when the same students were offered early release from school on Friday as a reward for completing classwork, the percentage of time the students misbehaved dropped from 34 to 8 percent.
- Inappropriate behavior among high school sophomores dropped from 75 to 15 percent of the time when the students entered "contracts" awarding them with free-time activities in exchange for appropriate classroom behavior.
- Contracts awarding library visits or quiet visits with friends in exchange for a minimum number of work pages correctly completed stimulated high school seniors to raise their class grade average from a C- to a B.

Readings

Characteristics of Schools with Good Discipline. Thomas J. Lasley and William W. Warpon. *Educational Leadership*, December, 1982, pp. 28-31.

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Exploring Alternatives to Punishment: Keys to Effective Discipline. T.R. McDaniel. *Phi Delta Kappan*, March, 1980, pp. 455-458.

"Improving Discipline Through Unrigging the School." Eugene R. Howard. *What's Noteworthy on Discipline*, Mid-continent Regional Educational Laboratory, Kansas City, MO, 1980.

"Teacher Effectiveness Training." Tom Gordon.

"The Gentle Art of Classroom Discipline." F.H. Jones. *National Elementary Principal*, 1979, Volume 58, pp. 26-32.

An accepted axiom in education is that students accomplish what is expected of them. At least, it seems reasonable to believe that students will set their goals no higher than those set by their teachers. This has serious implications when we consider all the different ways teachers signal expectations to students. Some signals come from the ways students are grouped–a youngster placed in the lowest math or reading group knows he or she is considered slow and that not as much will be expected of him or her. How teachers move, who they talk to, how long they wait for responses, and a variety of other classroom mechanisms also telegraph teacher expectations. Expected behavior tends to be reinforced and self-perpetuated; if the teacher expects a student to perform poorly, he or she does, and the expectation is reinforced. The cause-effect relationship between expectations and performance is a complex one and understanding how expectations affect a classroom requires careful thought and introspection on the part of the teacher.

Numerous studies have documented the direct relationship between the teacher's expectations and the student's achievement and performance. (See the Research Reports section of this folio for brief descriptions of some of the studies on expectations.)

Tips for Teachers

The research on expectations suggests that teachers can behave in ways that alleviate problems associated with inappropriate expectations. To cover these suggestions we will address the following areas:

- expectations in the classroom;
- how expectations develop;
- student expectations;
- expectations and achievement; and
- expectations in the multi-ability classroom.

Expectations In The Classroom

Teachers' expectations for students cover many aspects of student behavior, from academic performance to social maturity, creativity, and independent thinking. Expectations are communicated in a variety of ways, but the messages emerge: some students are winners and some are losers. Low achievers soon realize they are less likely to be called on, especially if they look puzzled. These students know they are called on less because the teacher thinks they won't have the answers. They may seek other ways of getting attention, or they may invisibly drift through school. No wonder some students give up on school before they finish even the elementary grades. The unsuccessful student is painfully aware that teachers and other students also know that he or she is unsuccessful. Imagine what the school experience does to that student's self-esteem.

Even when teachers try to be warm and encouraging to low achievers, low expectations may still be communicated. For example, the teacher may praise low achievers for accomplishments that are insignificant. Praise for trivia is often interpreted by students as proof that the teacher thinks they're "dumb," why else would they be praised for a simple task that everyone does routinely?

It's a vicious cycle; a teacher expects little from a student and acts accordingly; the child reacts to the message and fails; and everyone's expectations are reinforced. What's to be done? Solutions are not simple. An important first step is for teachers to recognize the problem. Teachers can improve their expectations for all students in the following ways:

- Assess their view of each student's ability.
- Discover how expectations might affect their actions. Document interactions with students. Does the teacher call on the same few individuals? Are all students given equal attention? Are there students who are overlooked or forgotten?
- Give all students opportunities for success. Researcher Jere Brophy suggests low achievers need to be encouraged with tasks that allow them to experience 80-100% success. Success builds student confidence and self-expectations.
- Use praise carefully and appropriately; praise students for specific accomplishments when deserved. Praise should never be automatic.
- Give attention to all students. Feedback and response time should be the same for all students.
- Give low achievers time to answer questions. If students hesitate, rephrase the question or give a clue.

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How Expectations Develop

If low teacher expectations contribute to low student achievement, then clearly the solution is for teachers to raise their expectations. Before that can happen, however, it is important to understand how and why expectations develop.

Far too often, teachers' expectations are based on the opinions of others. In school, these opinions come from subjective evaluations by a student's previous teacher, "labels" given students while at school, the comments and concerns of parents, students' standardized test scores, or even the students themselves. Students who have learned to believe that they are failures will easily convince the teacher that they are unable to do well.

A powerful influence on a teacher's expectations is the accepted practice of using a student's reading ability as the overall indicator of academic ability. Which students are considered the brightest? Which students are expected to succeed at new tasks? Teachers assume that the students who are the best readers will be the best at any task.

According to Elizabeth Cohen of Stanford University, classrooms are run in a way which creates and maintains a status order based on students' reading ability. Better readers occupy the top slots in the status order; they are assumed to be more competent at any task, even those not involving reading. Ability grouping reinforces this status order. Teachers and students understand and accept the status order, and expectations and actions are colored accordingly.

The phenomenon whereby having a high skill level in one area generalizes to expectations for high skills in other, possibly unrelated, areas is called "status generalization." Status generalization operates in the classroom, but also in the areas of social power, sex, race, and even athletic prowess. For example, when status generalization is operating, it is more likely that a professional basketball player would be assumed to be more proficient at racquetball than a professional musician because the basketball player had already "proven" him or herself in athletics. The consequences of this example of status generalization are that the musician is much less likely to succeed as a racquetball player than is the basketball player because he or she is not expected to play well; the basketball player, on the other hand, may benefit as a racquetball player from the high expectations that generalize from his or her athletic status in basketball, but it is also possible that he or she may become overconfident, try less hard at racquetball, and fail. Most importantly, status generalization creates drastic differences in the learning opportunities available to high status (good reader) and low status (poor reader) students.

Often, standardized test scores play a major role in the development of the teacher's expectations for a student's academic performance. What teachers need to realize, however, is that these test scores often are not good indicators of a student's academic ability for several reasons.

For example, much of what is tested isn't taught at the grade level where it is tested. Further, much of what is taught isn't tested at all; standardized tests are simply too short to adequately cover a year's worth of content. In addition, the very nature of standardized tests precludes their use as a predictor of performance in specific content areas. The test scores are a comparison of an individual's performance on the test against the performance of other students nationally; to insure that they measure the broad range of achievement present in the nation's students, the tests resort to a number of technical procedures for increasing the difficulty of each item. Problems are arranged in an unusual manner (e.g., math problems in a horizontal format) or irrelevant material is added that may throw some students off the track of the right answer. These complications are inserted to insure that there will be a wide variety of student answers to each item, however, they reduce the tests' usefulness as a predictor of academic skill.

To alleviate the influence of expectations developed from external sources, teachers can:

- Refrain from making judgments about student ability based on previous years' reports, grades, or unsubstantiated information.
- List students and indicate those they expect to do well and those they expect to do poorly. Look for patterns evolving from race, ethnicity, or socioeconomic status.
- Teach all the students in the class. Teachers who help all students succeed communicate expectations that all students can learn.
- Avoid using reading ability as the only predictor of school success.
- Group students by different methods for different activities: by age, height, or alphabetically, as well as by ability. Though ability grouping is appropriate for some learning tasks, avoid using ability groups exclusively. Grouping students in many ways helps break up the expectations set up by ability groups. Another alternative way of grouping students for learning tasks is by using Student Team Learning, a program developed at Johns Hopkins University's Center for Social Organization of Schools. Student Team Learning allows a teacher to instruct students in heterogeneous ability groups while testing them in homogeneous ability groups. (To find out more about Student Team Learning, see the McREL Quality Schools Program folio, *Motivation*.)

Students' Expectations

Like teachers, students have expectations for themselves and those around them. Student expectations tend to mirror the expectations of others. Student expectations for themselves and their classmates represent a powerful classroom force.

In classroom settings students take their cues from teachers. If a teacher expects students to do poorly, the students expect as much from themselves, and so do their classmates (This mirroring effect illustrates how teacher expectations can be so powerful.).

Students form expectations for classmates as early as kindergarten. Researchers noted that students in high-ability groups made derogatory remarks about the drawings of children in low-ability groups. Also in kindergarten, students perceive expectations others hold for

them. They use these perceptions in the process of developing a self-image.

To positively influence student expectations, effective teachers:

- Learn what students expect from them and from school in general. Understanding student expectations can help teachers understand the teacher-student relationship.
- Use questionnaires and interviews to discover what students expect.
- Take seriously the power to influence students' expectations of themselves and their classmates. Offhand remarks teachers make about one student to another can be damaging.
- Understand that a student's expectations are formed early in their school careers.

Expectations and Achievement

Low expectations cause teachers to provide fewer learning opportunities to certain students. But what does this mean in terms of specific teacher actions? What are the actual reasons why low expectations lead to lower achievement?

Teachers often avoid calling on students they believe are less able. These students become less able precisely because they are not called on; they are not made to think and do not have the opportunity to exercise their intellectual skills on difficult questions. Even when less able students do answer questions, they frequently get little or no feedback on their responses–right or wrong. Teacher feedback is especially important to low achievers. According to research, 18% of the time teachers fail to respond to low achievers; 3% of the time they fail to respond to high achievers.

Classroom observers have noted that some teachers show little personal regard to students with less academic ability. This behavior includes rudeness, lack of interest in the lives of low ability students, and inattentiveness to their conversation.

Undoubtedly, many teachers discriminate unconsciously and unintentionally. But that does not lessen the negative effects of their behavior on students.

Effective teachers use the following strategies to communicate high expectations to students:

- Make a conscious effort to call on all students.
- Make sure students get the help they need, even those who may not ask for it.
- Allow adequate response time for each student (at least five seconds after asking a question).
- Delve for answers by rephrasing questions, or by giving clues or more information.
- Give low achievers opportunity to practice their thinking skills on higher-level questions.
- Offer positive reactions to student answers–either affirmative or corrective.
- Make praise specific and sincere.
- Look at students when they are speaking, and listen to what they say.
- Be sensitive to students' emotional needs.
- Show respect for students; model the courtesy they expect in return.
- Show an interest in the lives and experiences of all students.

Expectations in the Multi-Ability Classroom

Given the powerful influence of expectations, it would seem that they could be used to advantage in facilitating teaching and learning. And indeed, they can be. High expectations correlate with high achievement.

How can teachers raise their expectations and those of the students?

Perhaps the most promising approach is a strategy known as the multi-ability classroom. Developed by Elizabeth Cohen of Stanford University, this approach rejects the idea that intelligence and competence can be judged solely on the basis of reading ability. Instead, the approach recognizes that many different skills contribute to an individual's overall competence. Students learn that everyone has something to contribute to the group, and as they learn this important lesson, their expectations change–for themselves and for each other.

In the multi-ability classroom, it is important to demonstrate both that low achievers have skills and abilities and that high achievers are not necessarily skilled in all areas. Cohen found that the high expectations always held for high readers often makes them become overly-confident. As such, they tend to dominate their classmates in all activities. Multi-ability classrooms improve student skills, including reading, by encouraging students to help each other; as students' skills improve, their peers' expectations of them rise.

The multi-ability classroom not only increases student expectations and learning, it has other payoffs as well. Its emphasis on cooperation and interaction improves racial relations and attitudes. Attitudes about sex differences change too.

Cohen suggests five steps for implementing the multi-ability classroom. Teachers:

1) Choose an interesting task that involves multiple abilities (for example, drawing, visualizing, managing, organizing, etc.), leadership roles for all students, private evaluations, feedback from peers (in small groups), and a de-emphasis on grading and competition. The task might be an experiment or observation in science, role-playing in language arts, or simulations in social studies.

2) Prepare the task. Make sure that the multiple skills identified are really essential to completing the task.

3) Prepare students for the task. Describe the task and stress that what they will be doing is similar to how adults draw on a number of different skills in the real world. Explain the abilities and skills involved (you may want to chart them in both pictures and words and place the chart where all students can see it) and explain that everyone will be good in at least one of the needed skills. Also let students know that they can ask each other for help in reading or writing.

4) Monitor the task in progress. Make sure all students are participating and helping each other when necessary, and that no one is dominating the interaction.

5) Evaluate the completed task as a group effort. Avoid public evaluations that link performance with reading skill. Have students evaluate themselves on the different abilities.

(For more detailed instructions for implementing the multi-ability classroom, see, "The Effects of Classroom Status on Learning: What Teachers Can Do," *What's Noteworthy on School Improvement and Technology*, Winter, 1982, p. 52.)

Research Reports

Expectations In The Classroom

In a review of research, Jere Brophy of the Institute of Research on Teaching reports that:

- Successful teachers–those whose students perform well –have consistently high expectations for all their students.
- Teachers with high expectations set higher goals, provide greater focus, demand student accountability for work, and offer equal attention and feedback to each individual.
- When teachers have low expectations for certain students, they tend to ignore them during class recitations or discussions. They concentrate more on controlling these students' behavior than on instructing them.

Several major studies have documented teachers shunning students labeled as low achievers. Shunned students receive no eye contact, praise, or opportunity to answer in class, and they have little interaction with the teacher in general.

A year-long experiment in twenty Los Angeles County school districts addressed the problem of shunning by training teachers to pay equal attention to all students. The teachers were taught to call frequently on low achievers, praise them often, and work with them as much as they worked with other students. The result was that teachers' expectations rose, and so did students' reading scores.

Expectations are often communicated through teachers' use of praise. Brophy reports:

- Higher achieving students receive praise for academic performance, while lower achievers receive praise for good conduct.
- White students receive more praise and encouragement than minority students, who receive more negative comments.

Also different is the type of praise offered high and low achievers. According to Mary Budd Rowe, University of Florida, low achievers receive more "nonpertinent praise," than do high achievers and are often praised for trivial things or when they respond incorrectly to a question.

Common, everyday school practices communicate high expectations for some students and low expectations for others, says Eugene Howard of the Colorado Department of Education. For example, practices such as:

- labeling students as "accelerated" or "remedial",
- ability grouping,
- tracking, and
- class rankings in high school.

How Expectations Develop

- Expectations are frequently associated with cultural, gender, and racial differences, according to Jere Brophy.
- A student's socioeconomic status (SES) also affects teachers' expectations. Byron Brown and Daniel Saks of the Institute for Research on Teaching report that teachers interact less with low SES students and assign them more seatwork than other students.
- Teachers' expectations for themselves as teachers play a large part in determining their expectations for students. Teachers with the highest expectations, says Brophy, are those who believe that instructing students in the curriculum is their primary role. These successful teachers expect all their students to learn, and they act accordingly.
- Ultimately, expectations for student ability and performance are often based on a single factor: reading ability. In extensive work at Stanford University, Elizabeth Cohen has shown that students who have good reading ability are assumed to be competent in any academic area, whereas those with poor reading ability are expected to do poorly on any task. Our entire education system, says Cohen, is influenced by this notion of reading ability as the sole indicator of intelligence.

Student Expectations

- Jere Brophy and other researchers note that students' expectations for themselves are a direct reflection of the expectations others have for them.
- Students' expectations for their classmates are to a large extent dependent on their teachers' expectations for these students. According to Elizabeth Cohen and other researchers, students judged as low in ability by their teachers are perceived that way by their classmates.
- Interestingly, students have some definite expectations for their teachers. Donald Cruickshank of Ohio State University reports that students expect their teachers to be: 1) helpful, 2) fair, 3) patient, 4) firm, 5) encouraging, 6) friendly.

Expectations and Achievement

In reviewing a large body of research on equal opportunity in the classroom, Lyn Moran Hutchins of McREL summarized three areas where teachers treat students differently: response opportunities, feedback, and personal regard.

Response opportunities:

- Teachers call more on high achievers than on those they think are less able.
- Students who may need help but are not aggressive enough to ask are consistently ignored.
- Teachers allow more time for higher achievers to answer questions.
- Fewer clues are provided by teachers when questioning low achievers and they don't delve as deeply for answers from low achievers.
- Low achievers are asked the easiest questions, thus denying them practice in higher-level thinking.

Feedback:

- Teachers are less likely to react to the responses of low-achievers–neither reinforcing appropriate responses nor correcting inappropriate ones.
- Low achievers receive less praise and more criticism, even when their answers are correct.
- Teachers spend less time listening to low achievers.
- Teachers have trouble relating to the feelings and emotions of their students, especially those they see as less able.

Personal regard:

- Teachers fail to model behavior that shows courtesy and respect to low status children, even though they are especially concerned that these same children behave respectfully to them.
- Teachers focus their attention on the experiences of higher status students.
- Fast learners are touched physically by teachers more often than slow ones.
- Low achievers are given the greatest share of commands and dominating contacts.
- Low achievers are separated from the rest of the class by placing them in a group at the rear or side of the room.

Expectations in the Multi-Ability Classroom

Elizabeth Cohen and her colleagues have identified a variety of student skills that contribute to competence in the classroom. Both teacher and student expectations in the classroom may be raised when these skills are considered essential to task completion and academic success, for often poor readers (low status students) demonstrate great facility in these skill areas. These include:

- suggesting new ideas,
- helping a group reach a decision,
- visualizing problems or solutions,
- creativity,
- reasoning (for example, identifying features of objects or concepts, categorizing, identifying relationships, seeing patterns),
- physical skills (strength, dexterity),
- solving problems as they arise (working independently),
- being persistent (tolerance for failure, incongruence), and
- being curious and ingenious.

Cohen found that in a multi-ability classroom, low status students gained status as they demonstrated their skills and competencies in other areas. These same students improved their reading ability by interacting more with other students. Learning increased for all students.

Further, the student interaction encouraged by this approach not only helps students learn to cooperate, it helps them develop conceptual and oral language skills as well.

Suggested Readings

Teacher Application Pamphlet: Designing Change for the Classroom. Elizabeth G. Cohen. Final Report of the Status Equalization Project: Changing Expectations in the Integrated Classroom. Stanford University, 1980. (To be published as a book by Teachers College Press in 1983.)

"Some Are More Equal Than Others." Lyn Moran. *What's Noteworthy on School Improvement,* Summer, 1981. The Mid-continent Regional Educational Laboratory, Kansas City, MO.

Recent Research on Teaching. Jere Brophy. Institute for Research on Teaching, Michigan State University, East Lansing, MI.

"Teacher Behavior and Its Effects." Jere Brophy. *Journal of Educational Psychology,* Vol. 71, No. 6 (1979), p. 735.

STUDENTS CAN MOTIVATE EACH OTHER: STUDENT TEAM LEARNING

Student Team Learning is an unique program that allows teachers to instruct groups of students from all ability levels while testing them in homogeneous ability groups. The program was developed and tested at the Center for the Social Organization of Schools at the Johns Hopkins University.

Student Team learning is highly motivational for students, and:

- it has demonstrated effectiveness in raising student achievement;
- once teachers try it, they and their students like it and use it over and over again;
- it can be used at almost any grade, K-12, with nearly any subject for as long or as little as you want;
- it increases students' responsibility for their own learning;
- once established, it reduces teacher "teaching" time;
- it increases peer-tutoring;
- it solves the problem of organizational grouping patterns that tend to place children of the same ethnic background or the same achievement level together.

What more could you ask for?

In the following paragraphs we will briefly describe how "Teams-Games-Tournaments," one of the components of the program, works.*

Step 1: Take your grade book and divide the class into four groups: one-fourth in a "high group," one-fourth in a "low group," and the remaining students into medium-high and medium-low groups. Ideally, you'd create four groups of four each. Since most classes are larger than that, you can double the number of groups by creating two groups at each ability level.

Step 2: Now assign students from each of these groups into teams. Each team gets one high student, one low

* This description may not solve all the issues that come up when you try the program. We suggest you write to the Johns Hopkins Team Learning Project Center for Social Organization of Schools, The Johns Hopkins University, 3505 N. Charles St., Baltimore, MD 21218, for a copy of the teacher's manual.

student, and one from each of the two middle groups. As you make these assignments, juggle distribution so each team is representative of the race and sex composition of the class. If the number of students isn't divisible by four, the remaining students can be organized into 1 to 3 five-member teams.

Step 3: Prepare your lesson and introduce it to the children. Usually, but not always, teachers divide their instruction into week-long units, introducing a new unit each Monday and holding the tournament on Friday. On the first day, lay out the content to be covered in as clear a fashion as possible; tell them what you expect them to know by Friday. Also tell them what resource materials they need to learn the content–you may schedule a lecture during the week, tell them what pages in their text to cover and/or give them a list of resources they can get from the media center or library.

Step 4: During the period assigned to the subject each day, teams are on their own to cover the material. This is where the peer-tutoring goes on because once they understand the idea (and it probably will take one round before it is completely clear) they all want their team to do as well as possible and, consequently, will help each other. About the middle of the week, give each team some sample items from the test and let them decide how well they're doing. That will function as a self-diagnostic procedure for the students.

Step 5: On Friday, or the last day of the unit, you assign them to "Tournament Tables." Assignments to these tables are made so that only high-ability students are assigned to table 1, medium-high students to table 2, medium-low students to table 3, and low-ability students to table 4. (Double the number of tables if necessary.) Thus, they are competing with students of approximately equal ability and the low students as well as the high students have an equal chance of taking home winning points to their team. The kids soon sense the fairness in this situation.

Step 6: Now they compete to see who can correctly answer the largest number of questions over the content. You develop the questions just as you would any objective test with multiple-choice items, etc. Provide each tournament table with a copy of the test and, separately, an answer-key kept face-down on the table except when they are checking an answer. Each table must also have a deck of cards numbered 1 through the number of items on the test. (You can re-use these decks over and over.) The decks are shuffled. Each student draws one card to decide who starts; the student with the winning hand starts by becoming "the first reader." Before starting, the cards are replaced in the deck and shuffled. Then the "first reader" draws the top card. The number on the card determines the question on the test he or she will try to answer. The "first reader" reads the question and gives his/her best answer. Before checking to see whether the answer is correct, the player to the left of the reader (the "first challenger") has a chance to challenge the answer. If this second player thinks another answer is better, he or she simply says "I challenge, I think the answer is..." The third and subsequent players can challenge in turn. But they can only challenge with an answer that has not been given. Once the challenges are through, the "second challenger" checks the answer sheet and reads the answer out loud. Whoever is right gets to keep the card representing the question number. If any challenger is wrong, s/he must put a card s/he has previously won (if any) back in the deck. Thus, there is little risk to the child who has won nothing. If no one is right, the card is returned to the bottom of the deck.

For the next round the game moves to the left–the first challenger becoming the first reader and the second challenger becoming the first challenger. The game goes on either until all questions have been answered correctly or a pre-set time limit has been reached.

Step 7: Give each table a simple score sheet that they can complete indicating the number of questions they each got right. You can then calculate the scores for each of the original teams. (An easier way is to have them carry the cards they won back to their teams; they can then quickly count the number of cards each won–but if you take this easy way out, the cards will have to be rearranged for later play.)

Usually these tournaments go on for several weeks (after about six weeks new teams should be created to avoid the development of cliques) and the excitement grows just as it would in any competitive sport.

Special problems arise in calculating scores when the numbers on a team are uneven. The manual provides a way of prorating raw scores for teams with two, three, or five members. (See the table.) It also has a procedure for adjusting quiz scores to a standard point scale so that quizzes of different lengths can be used from week to week. The manual has rules for other games and suggestions for making your own materials. Additionally, program materials on a variety of subjects are available from the publisher.

Teachers and students alike are usually very excited about "Student Team Learning." Upper elementary and secondary teachers will especially find it helpful for motivating students they have difficulty reaching.

Motivation

What is motivation? Motivation is a thorny issue for many teachers, in part because it is an abstract concept that is not easy to define operationally. Motivation is generated by a person's needs, and is the force that guides that person's actions. Because motivation is internally generated, teachers must not underestimate the importance of each student's personal needs; the challenge for teachers is to create an environment where students' needs can be satisifed through learning. Motivation may be intrinsically tied to the art of learning, e.g., the real desire to know something, or it may be tied to other needs, e.g., the need to stay out of trouble or to receive praise. Ideally, the effective teacher finds ways to increase students' motivation to learn.

This is not always a simple process, however, for the motivation to learn is closely tied to phenomena like self-esteem and is profoundly affected by extra-school factors such as physical health, emotional well-being, and parental attitudes toward education.

So what can teachers do to increase student motivation?

First, accept the reality that motivation is an internal phenomenon. This means that nobody can motivate anyone else to do anything. You can provide students with opportunities, incentives, and attractive and stimulating tasks; you can match student interests with learning activities; but you cannot make students learn.

Second, it is important to realize that educational research is debunking some myths about student motivation, such as:

- threats can motivate students to learn;
- students who are not involved in activities are unmotivated; and
- learning automatically improves with increased motivation.

Third, you need to know that the research has identified some interrelated factors that influence student motivation. These factors are: student success, classroom environment, instructional strategies, and rewards.

Student success. One of the most critical tools for improving student motivation is increased success. A teacher who presents a task that is too difficult or poorly explained turns students off – they take the position, "What's the point? I can't do it anyway, why even try."

When teachers help students experience success, students gain self-esteem and are more confident about working toward additional successes. Effective teachers help students succeed by using teaching practices that are designed to increase academic success and by making sure students are aware of and feel responsible for their academic progress.

It is important to understand the ties between motivation, experience of success, and student expectations: children begin their school careers eager and curious, but as schooling progresses many students become sullen, withdrawn, disruptive, or underachieving. Schools' rigid achievement and reward structures make learning an increasingly unrewarding experience for these students; their self-image is threatened by school failure. These students often use "coping" strategies to salvage self-esteem. For example, a student who consistently fails tests may resort to cheating in order to get better grades. A student who is unable to complete assignments may misbehave to bolster his or her self-esteem through peer attention. Another student who is constantly reminded that he or she is an academic failure may stop trying altogether because the expectations being communicated are that he or she can do no better. Thus, the cumulative effect of past failure may stand as its own roadblock to motivation. Even if a teacher presents a task appropriate to a student's skills the student may still avoid the task because of the belief that he or she will fail or because the coping strategies he or she has learned in the past may be more rewarding than completing the task. (Sometimes the principal's office is more interesting than the classroom.) Or, the coping strategy may represent an easier way out. When a teacher is faced with such a student, only repeated, patient efforts are likely to get the student back on track.

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Classroom environment. A positive classroom environment, one that promotes mutual respect, warmth, high standards, and high achievement, enhances student motivation. Through their attitudes and behaviors, effective teachers show that they care about their students while maintaining a businesslike approach toward learning. An attitude of caring and respect must not be underestimated as a tool for increasing motivation; many students will put forth extra effort just because the teacher cares enough to ask them to try.

Instructional strategies. Effective teachers use instructional strategies that stimulate student motivation. Engaged time (amount of time students are actively engaged in their work), classroom management, interactive instruction, immediate and interactive feedback, appropriately paced lessons and activities, and selection of challenging materials are all related to increased student motivation and, in turn, to academic achievement. Activities and lessons that are interesting, appropriate to student skills, and briskly-paced will keep students engaged longer. (See the McREL Quality Schools Program folio, *Instruction*, for more suggestions in this area.)

Rewards. The use of external rewards to influence student motivation is a traditional but controversial practice. Some educators question, for example, whether external rewards might be counterproductive to learning by making it more difficult for students to perform learning tasks without rewards. They believe that simply knowing a correct answer should serve as an internal reward. On the other side there are advocates who point to numerous examples of how rewards have helped students become better-motivated learners; some students are motivated by rewards like praise or "gold stars."

Research suggests that the most effective approach to influencing student motivation is a combination of internal and external rewards. (Lists of suggestions of both internal and external rewards are found in the Motivation Menus section of this folio.)

Tips for Teachers

Student Success

Helping Students Succeed. There are a variety of ways teachers can structure the learning environment to ensure student success at academic tasks.

- Survey students to discover their individual interests, concerns, and needs. Use this information when selecting their assignments. (A sample "Student Motivation Information Form" is included in this folio.)
- Analyze assignments to ascertain the specific skills involved and then make sure that the students possess those skills. Don't overestimate the academic skills of your lowest achieving students. They may have developed techniques for concealing their weaknesses, and may be three or four grade levels behind their peers – that fourteen-year-old may not even know the multiplication tables!
- Preview assignments with students – tell them and show them exactly what is expected of them and what the end product should look like. For example, give students copies of past themes or projects you liked that are within their range of skills.
- Set forth clear and measurable objectives, demonstrate how learning activities relate to the objectives, and evaluate students' performance according to the objectives.
- Allow students to fail without criticism. Expect them to make many trials; leave these trials undocumented.
- Record all student successes.
- Match learning tasks with student skills and interests.
- Assign some tasks at which students are sure to succeed.

A student's self-concept is affected by teacher behavior, expectations, and communication patterns. Teachers who help students build positive self-images often use the following strategies.

- Actively listen to the students. In active listening, the message receiver tries to understand what feelings lie behind the speaker's words. The receiver then puts his or her understanding of the message into his or her own words and feeds it back to the speaker for verification. The receiver is careful not to add a message of his or her own – advice, opinion, evaluation, judgement, question, analysis, or solution – but only what he or she thinks the speaker's message means.
- Hold high expectations for all students. Over and over the research demonstrates that students tend to live up to what is expected of them. We communicate our expectations by words and actions. Words and actions must be consistent for the message to ring true. It is especially important to know that teachers have ways they unconsciously signal to students that they do not expect them to succeed. (See the McREL Quality Schools Program folio, *Expectations*, for more information on these signaling mechanisms.) Also realize that ability grouping automatically tells some students (the ones in the "low" group) you expect less of them. Research suggests avoiding ability grouping whenever you can.
- Set high standards for yourself. Because students tend to imitate behaviors they see, teachers must practice what they preach. If teachers set deadlines for students, they should meet their own. If teachers want respect, they should treat others with respect.
- Model a positive self-concept. Teachers who respect and care for themselves find it easier to extend care, respect, and acceptance to students, which encourages students to be self-accepting.

Classroom Environment

Effective teachers create an atmosphere of trust and mutual respect in their classrooms, as well as a work-oriented climate. This combination of classroom conditions is motivating for students.

- Teacher attitudes and behaviors mean a lot. Positive attitudes, infectious enthusiasm, words of encouragement, and high expectations are all motivating. Teachers who are warm, patient, tolerant, and interested in students are able to influence students' class performance as well as influencing them in other positive ways.

- Encourage students to share experiences and learn about each other. Ask students to discuss something they like to do and do well; or to teach the rest of the class about a hobby, skill, sport, musical instrument, or other special interest they have.
- Create a "proud-of" bulletin board for posting individual and group work, pictures, and drawings. Polaroid pictures of students next to their poems, stories, or perfect homework can be quite reinforcing and motivating.
- Make sure your classroom is well-organized: students know where to find materials, how they are expected to behave, the procedures for beginning and ending class, etc. A classroom that is orderly and managed well provides a safe environment that motivates learners. (See the McREL Quality Schools Program folio, *Beginning the School Year*, for tips on setting up and teaching the rules, routines, and standard operating procedures that are the basis of a well-organized classroom.)

Instructional Strategies

The instructional strategies teachers use to increase student motivation are grouped in four categories: feedback, competition, student control of the learning process, and student responsibility for learning.

Feedback

- Use immediate, task-specific feedback to help students learn from their mistakes. When nonevaluative feedback promptly follows an error, the error becomes a means of instruction rather than a signal of failure.
- Give positive as well as corrective feedback, especially during class time, to encourage students to continue to volunteer answers and to participate in class discussion. Low achievers or students with a history of failure in particular will benefit from this supportive type of interaction.
- Make students aware of their progress. There are many ways of accomplishing this, from wall charts with stars representing achievements, to allowing students to periodically check their progress by looking up their records on the school's computer system.
- Try assigning tasks with built-in feedback. Feedback that is built into the task itself is highly motivating; this is the type of feedback video game enthusiasts receive. Not only is their score registered on the screen second by second, but players can see immediately whether or not their strategies are working. Teachers can build feedback into tasks via continuous monitoring of student progress; for example having the entire class work the same math problem at the blackboard. Computer assisted instruction is another activity that can provide built-in feedback if it is well designed.

Competition

- Friendly, well-organized competition, where each student has a chance to succeed, can be highly motivating.
- Ask students to compete against themselves. Each student can work to beat his or her previous score on a particular activity or task. This is a fairly unthreatening way to use competition to enhance motivation. The teacher or student keeps a record of grades, correct responses, speed, and so on to document improvement.
- Teams-Games-Tournaments is a fun, competitive, learning activity that involves having students learn in heterogeneous ability groups (teams) and compete in homogeneous ability groups, bringing their "points" home to their team. See the box titled "Student Team Learning" in this folio for information about this activity.

Student Control of the Learning Process

- A feeling of control gives students more investment in learning. Very young students can take some control by choosing which activity they will do first.
- For many older students the sense of involvement and control over what they will do is crucial. Teachers can negotiate with these older students about learning tasks; often several activities will meet the same objective or the student may have other ideas that can be used to meet the objective. Allowing students to plan their own learning tasks or to choose from several options gives them a sense of control.
- Student-teacher contracts, wherein the student agrees to complete specific assignments and the teacher agrees to award a specific grade contingent upon completion of those assignments, are motivating for some students.

Student Responsibility for Learning

- Students need to realize that they are responsible for their own motivation to learn. Hold class discussions about motivation to help students discover what motivates them. (You might also use the "Student Motivation Information Form" included in this folio.)
- Once students identify what motivates them, help them practice strategies to heighten their own motivation.

Rewards

Effective teachers learn to match rewards with the needs and preferences of individual students. These teachers also tie rewards to specific educational objectives and make sure the rewards are appropriate. Teachers can:

- Learn what is reinforcing. Through careful observation, teachers can learn what is most reinforcing for individual students; they match rewards with student needs and preferences.
- Try "different" reinforcers. Instead of using stickers or tokens or other tangibles, try such things as the opportunity to be first to go to lunch, to have extra library privileges, or to perform special tasks for the teacher. These incentives can be tied closely to the goals of education. (The Motivation Menus in this folio list reinforcers that have been used successfully by educators working with McREL.)
- Use praise carefully. Remember that praise is only reinforcing to some students; also, praise may hook students on external rewards and weaken their self-motivation. Use of praise should be sincere, specific to the student's accomplishment (general praise does not tell them what they did well), and adapted to the student's preferences. Secondary teachers need to be judicious in their use of public praise; many older students are embarassed by being praised in front of their peers but will respond positively to a note on their paper or a private word as they leave class. (For more information about the use of praise, see "Your Praise Can Smother Learning," *Noteworthy*, Winter, 1982.)

- Try some school-wide motivational strategies. Ask the principal and other teachers to help create a more motivational school environment. For example, reward students and teachers with special verbal recognition: have an administrator call nominated individuals to the office for a verbal "pat on the back" – or send home a positive note.

Research Reports

Student Success

In an extensive survey of the research literature, Donald Cruickshank of Ohio State University found that teachers can help students succeed by:

- Teaching clearly–offering precise statements of purpose, explaining concepts with examples, helping students organize their work, and clearly stating expectations.
- Being enthusiastic.
- Using a variety of teaching styles and materials, and adjusting content to the learner.
- Providing students with the best opportunity to learn the material covered–through carefully organizing lessons.
- teaching students how to study, etc.
- Acting businesslike and work-oriented–supervising or directing most student activities, always in a warm and congenial manner.
- Recognizing that pupil motivation is related to personal needs.
- Helping students get the most out of school–by attending to personal as well as academic growth and development.

Classroom Environment

Studies by researchers such as Jere Brophy, Donald Cruickshank, and Walter Doyle consistently describe features in positive classroom environments:

- Students dare to take risks.
- Students share their talents and encourage each other to learn more skills.
- There is an overriding sense of respect for self and others.
- Members of the class care for and trust each other.
- Students know they are important.

Instructional Strategies

Studies by Jere Brophy, Thomas Good, Carolyn Everton, Jane Stallings, Walter Doyle, and many other classroom researchers point to several consistently effective strategies for keeping kids involved in their school work. Among them are:

- Briskly-paced lessons that account for students' ability levels while keeping students alert and challenged.
- Teacher-directed instruction, or "active teaching" rather than students working alone.
- Variety and challenge in independent student assignments.
- Good questioning skills.
- Immediate feedback on student work.
- Team-learning approaches.

Rewards

There is evidence to document the pros and cons of external rewards. One private school has developed a whole system of external rewards where students receive points for writing and time on task; (see "Denver's Computerized School," *Noteworthy*, Winter, 1982 for more information) they can later trade those points for free time, money, outings, and video game tokens.

In a Research Action Brief, the ERIC Clearinghouse on Educational Management reports impressive short-term effects of external rewards; long-term effects are not known. The Brief also reports that grades are not effective rewards for many students.

Donald Cruickshank of Ohio State University reports that irregular reinforcement (e.g., a reward after three successful performances, then after five, then after two, etc.) is more effective than reinforcement at regular intervals. Cruickshank also reports that:

- Novelty works well in reinforcement.
- Reinforcement that relates to actual needs is most powerful. For example, for a lonely child, the teacher's recognition is more effective than candy or tokens.
- Rewards must depend on actual performance, not on what's promised.
- Reinforcement should match the size of the task. The smallest possible reward is the most effective.
- Reinforcement is usually positive. Punishment typically reinforces only negative behavior.

Teacher praise is a special form of external reward. Jere Brophy and Joyce Putnam of the Institute for Research on Teaching caution that praise, even if intended as a reward, may seem more like punishment to a child who is embarrassed or threatened by special attention. Their research shows that praise is effective only if it is:

- Sincere (spontaneous),
- Adapted in a form and intensity to specific accomplishments (no gushing over trivia),
- Expressed publicly or privately according to the preferences of the individual, and
- Specific in describing exactly what the student did.

Brophy and Putnam conclude that teacher praise, like other external rewards, nets mixed results. Extrinsic reinforcers, they believe, are effective only if the learning task is not meaningful.

Student Team Learning is particularly well thought-of as an innovative instructional program. See the Summer, 1981, green *Noteworthy* for the full article entitled *Kids Who Team Teach*, pages 14-15. For further material, we suggest writing to the Johns Hopkins Team Learning Project Center for Social Organization of Schools, The Johns Hopkins University, 3505 N. Charles Street, Baltimore, Md 21218, for a copy of the teacher's manual.

Readings

"A 'Pac-Man' Theory of Motivation: Tactical Implications for Classroom Instruction." Richard F. Bowman, Jr. *Educational Technology*, September, 1982, pp. 14-16.

"Agency and Achievement: Self-Management and Self-Regard." John W. Thomas, *Review of Educational Research*, Summer, 1980, Vol. 5, No. 2, pp. 213-240.

"Allocated Academic Learning Time Revisited, or Beyond Time on Task." Jane Stallings. *Educational Researcher*, December, 1980, pp. 11-16.

Classroom Discipline. Research Action Brief prepared by ERIC Clearinghouse on Educational Management, No. 5, August, 1979.

Teaching is Tough. Donald R. Cruickshank and Associates. Prentice-Hall, Inc. Englewood Cliffs, NJ., 1980.

"Who's in Charge Here?" *What's Noteworthy on Discipline*, Mid-continent Regional Educational Laboratory, Kansas City, MO.

Resource Materials

"Student Team Learning." Center for Social Organization of Schools, The Johns Hopkins University, 3505 N. Charles St., Baltimore, MD 21218.

"Successful Motivation Strategies - Participant's Manual." Teacher's Institute of Continuing Education, 4621 N. 16th St., Suite F-608, Phoenix, AZ 85106.

What's Noteworthy on School Improvement, Summer, 1981. Mid-continent Regional Educational Laboratory, Kansas City, MO.

What's Noteworthy on School Improvement and Technology, Winter, 1982. Mid-continent Regional Educational Laboratory, Kansas City, MO.

FINDING OUT WHAT MOTIVATES YOUR STUDENTS

Knowing what students are interested in, what satisfies them, what rewards they value, and what they are curious about, can help teachers plan learning tasks which relate to student needs. In some cases the learning task may be directly related to a student's desire for a specific skill or information.

Raymond J. Wlodkowski of the University of Wisconsin, Milwaukee, has developed a way teachers can elicit from each individual student concrete information which can be used to boost his or her motivation to learn. His Student Motivation Information Form focuses on four basic areas of student preferences and characteristics: 1) interests, concerns, and desires; 2) satisfactions, accomplishments, and strengths; 3) valued rewards; and 4) items of curiosity, wonder, and exploration.

STUDENT MOTIVATION INFORMATION FORM

Date _____ Student Name _____

1. The best movie I've recently seen is _____
2. I'm very proud that I _____
3. A reward I like to get is _____
4. A beautiful thing I once saw was _____
5. My two favorite TV programs are _____
6. One thing I do very well is _____
7. My favorite school subject is _____
8. What seems mysterious to me is _____
9. When I read for fun I like to read stories about _____
10. One of my better accomplishments has been _____
11. If I had ten dollars I'd spend it on _____
12. I wonder about _____
13. When I have free time I like to _____
14. I know that I can _____
15. I enjoy _____
16. Something I want to do more often is _____
17. If I could go anywhere, I would go to _____
18. One of the things I like best about myself is _____
19. A good thing my teacher could do for me is _____
20. The question I want answered is _____
21. My favorite game is _____
22. In schoolwork my best talent is _____
23. Something I really want is _____
24. What really makes me think is _____
25. An important goal for me is to _____
26. I know a lot about _____
27. If I did better at school, I wish my teacher would _____
28. If I could get the chance, I would like to try _____
29. Sometimes I worry about _____
30. I feel satisfied when I _____
31. I spend most of my money on _____
32. When I get older I want to _____
33. Something I want to know more about is _____
34. The thing I like to do with my friends is _____
35. I like it when my parents give me _____

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MOTIVATION MENU

Here's food for thought: McREL held "school improvement workshops" in several of the states it serves. One of the nicest outcomes was this "menu" of motivational ideas teachers have successfully used with their students, classes, and schools.
Bon Appetit!

Column A
Recognition/Reward/Strokes

Teaching Others
Oral Comments
Smiley Faces
Attention
Grades
Teacher Excitement
Tokens
Knowledge of Results
Child Input
Tone of Voice Acceptance (Peers, Teachers, etc.)
Money
Trips
Happy-Grams
Stickers
Peer-Tutoring
Pat on the Back
Special Jobs
Quiet Class-Lunch With Teacher
Trips to Media Center
Lunch Invitations
Complimentary Comments
Happy Notes to Parents
Posting Names of Improved Students on Bulletin Board
Notes on Report Cards
Secret Friends
Daily Helpers
Immediate Reinforcement
Tangible Rewards
Specific Praise
Individual Evaluation
One-to-One Counseling
Daily Newspaper as a Prize
Citizenship Assembly
Smiles
Laughter
Friendly Greeting
Please/Thank-You
Skating Parties
Free Gym Period for Winning Class
Treats for Contest Winners
Warm Fuzzies
Stars
Warmth
Caring
Special Table in Lunchroom
Special Birthday Cards Signed by Staff
School Stationery
Send to Office for Good Behavior
"Birthdays" Party Honoring Birthdays and Inviting Parents
Good Citizenship Pictures Posted in Hall
Field Trip to Concert/Play
Pictures Displayed with Biographies
Art Work Displayed in Local Businesses
Friday Afternoon Club
Field Day "Olympics," Silly Olympics, Special Events, Non-Competitive Games, Gymnastics Night
Student Advisement Groups
All Papers Sent Home Once a Week
Student Council Bulletin Board with Student Pictures
MIC (Much Improved Child) Award
Good Behavior Coupons–Raffle
Speakers
Lunch Out
Board Work
Certificates
Phone Call Home
Academic & Service Award Assemblies
Lunch with Teacher
Earn Free Time
Trip to Amusement Park
Display of Class Work
Taking Work to Show Principal
Class Picnic
Pennies on Desk for Attendance
Classroom "Money" for Points
Free After-school Movies
Good Attendance–20 min. Free Time
Picnic for Class with Best Passing in Hall for a Month
Ice Cream Social for Good Behavior
Cookies for Week of Good Behavior
Slide-Show of School Activities
Talent Show (Parents, Teachers, Students)
Appreciation Day
Art Show
Hobby Display
Surprise Movie
Ribbons for Cleanest Rooms
Family Night Grade Level Dinner and Program
"Captain's Table"
Anonymous Nomination of Anyone I Saw Doing Something Good–Peer Prize
Hugs
First in Line
Responsibility Award for Time on Task
Chance to Visit Another Room
Teachers Attend Student Activities
Teachers Sit Among Students
Names in School or Community Newspaper
Monthly "Perfect Attendance" Movies
Much Improved Student Award
Award Assemblies
Graduation Pictures Posted in Halls
"I Got Caught Being Good" T-shirt Awards

Column B
Special Projects

Sing for Elderly
Clean-up
Making Books
Participation in Political Events
Song Fests
School Newspaper
Special Lunch or Dinner with Decorations
Potlucks
Theme of the Month
Slogan for the Year
School T-shirts
"Helping Projects"
Canned Food Drive
School Store
Birthday Charts
Make a Movie
Music Program
School Carnival
School-wide breakfast
"Cook-outs" with Parents/Teachers

T-shirt Sales
School Mascot on All Trash Containers
Class Officers in Each Room
Attendance Charts
Student or Teacher Profiles
Student Doing the Teaching
Mentors from the Community
Adopt-a-Grandparent
Career Fairs

Column C
Days & Special Events

Senior Citizens Day
Friendship Day
Crazy Hat Day or Special Hat Day
T-shirt Day
Backward Day
Dress-up Day and Hobo Day
Family Fun Night
School Colors Day
Cut-Off-Principal's-Tie (or Scarf) Day
Flag Day (Classes Make State Flags, etc.)
Ethnic Pride Day
Quiet Day with "Mum" Ball
Art/Music Talent Days
Picnic for Class with Best Passing in Jeans Day
Cowboy Day
Everybody-Wear-Red Day
Everyone-Compliment-Someone Day (e.g., Give 3 Compliments, Learn to Accept Compliments, etc.)
Everyone-Do-Something-Nice Day
Helicopter on Playground
Wear School T-shirt on Fridays
Wear-a-Flower Day
Halloween (Teachers in Costume, too) & Costume Parade
Appreciation Day
Safety Program
Bus Driver & Aide Appreciation Day
Dress-alike Day
50's Day
Clash Day or Mismatch Day
Storybook Character Day
Circus Day
Security Blanket Day
Special Guest Day
Parent Day (Lunch)
Staff Recognition Day
Run Races or All-Star Ballgames with Teachers or Principal
Foreign Food Festival
Elizabethan Festival
Decorating Lockers at Christmas
Field Trips
Secret Stocking Pals at Christmas

Column D
Special Expression/Understanding

Role-Playing
Planting a Garden
Farming
Animals/Fish
Plays
Speakers
Make a Movie
Field Trips
Wall Charts
Bulletin Board Model
"Hands-On" Workshops
Art
Music or Music Program
Tape Record Readings
Videotaping
Buddy System for New Students
Daily Helpers
Poetry
Touch
Secret Pal
"You Look Nice"
Opportunities for Decision-making
"Open Lunch" for Upperclass Persons
"Open Campus" for Upperclass Persons
Senior Class Lounge
Working with Partners
Centers of Interests (e.g., Painting)
Writing Letters
Work in Community (e.g., Sing for Elderly, Record Oral Histories)
Storytelling
Personal Experiences
Cross-age Tutoring
Making Books
Soothing Music in the Halls
Music in the Lunchroom Once a Week
Appreciation Day

Column E
Contests/Competition/Goals

Drawing
Math Contests
Spelling Bee
Games
Earn Free Time
Tournament
Faculty Sports Contest
Interschool Competition
Points
Spelling Week
Bingo
Film to Get Students in After Lunch or for Best Behaved Class
Popcorn Party for Best Class
Design School Flag, Insignia, Newsletter, Mascot
Cookies/Picnic for Well-behaved Class
PTA Membership Competition
Canned Food Drive
Weekly Ground Clean-up
Good Behavior Coupon/Raffle
Weekly Behavior Rewards
Children Run Races with Staff
Talent Show (e.g., Parents and Teachers or Students)
T-shirt Sales
Functioning Class Officers in Each Room
Jeopardy
Spelling Monopoly
Student of the Month
Boys Against Girls
Individual Competition
Time-test Winner for Breaking Own Record
Challenge
Candy Bar Question
Intramurals
"Whiz-a-matic Machine" Quiz Show–teams of students develop test items from their own current events reading

Column F
Everybody Can Participate

Song Fests
Art Fests
Field Days
Non-Competitive Games, Skiing, Skating
Grade-level Lunches by Principal
"Birthdays" Party Honoring Birthdays and Invite Parents
Board Work
School-wide Breakfast
Free After-school Movies
Popcorn Party
Review Teams for Tests
Mini-courses
Book club
Birthday Club
Read-a-thon

Column G
Show Off Work

Publishing
Harder Tests
Bulletin Board Display
Taking Home Book to Share
Showcase Projects
Bulletin Board Model
Wall Charts
Talk With Principal
Display of Class Work
Academic & Service Award Assemblies

Certificates
Make a Movie
Slide-show of School Activities
Art Show
"Talent Show" of Children's Projects
Show to Others
Show to Principal
Reading to Younger Students

Column H
Suspend the Rules

Free Time
Special Privileges
Write on Hands–to Show Last Year's Teacher
Mascot Travels from Room to Room
Sit-Where-You-Want in Lunchroom Day
Outside Play Time
Lunch Out
Phone Call Home
Earn Free Time
Trip to Amusement Park
Take Work to Principal
Special Excursion
Skating Parties
Shirt-tail Day
Hat Day
Gum in Class
Crib Notes for Tests

Column I
Teachers

"Every 'Teach' is a Peach" Award
Wine & Cheese Party–Faculty
Raft Trip–Faculty
Teacher Cook-out
Teacher Classroom Exchange Day
Celebrate Teachers' Birthdays
Teachers Dress Up on Halloween
Staff Recognition Day
Faculty Breakfasts
Hobby Display
Teacher of the Month
Teacher Appreciation Day
Administrative Support for Teachers Enforcing Rules

Column J
Parents

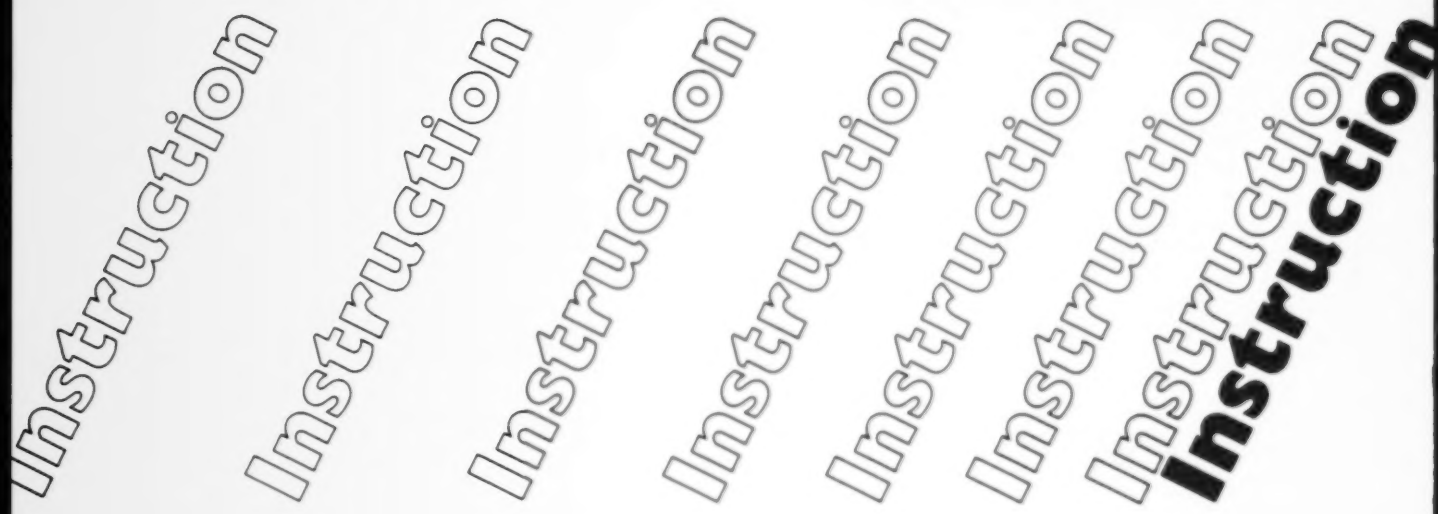
Parent Volunteer Program
Parent Luncheon
Phone Call Home
Happy Note to Parents
Parent-Teacher Cook Out
"Birthdays" Party
Grade-Level Family Night Dinner and Program
Parent/Teacher/Student Conferences
Ask Mom/Dad for Information
Parent-child Obstacle Course

Column K
"Extra" and Fun

A Surprise
Films
Holidays
Newness
Outside Trips
Free Time
School Assemblies
Concert
Reading Corners
Change Classrooms (e.g., on April 1)
School Sing-A-Long
Outside Play Time
Plays
Field Trips
Special Guest Day
Parent Day Luncheon
Staff Recognition Day
Lunch with Teacher
Trip to Amusement Park
Class Picnic
Special Excursions
Skating Parties
Spring Carnival
Computer Time for Time on Task
Lunchtime Dances

Column L
Room Arrangements

Guilt Corner
Pads
Warm Lighting
Pleasant Room
Individual Desks
Decor
Learning Centers
Subject Area Labs



Instruction is at the heart of teaching. All else supports the critical interaction that characterizes the relationship between teacher and student. What is it that characterizes effective instruction? At the heart is a series of phases or steps. Researchers have described these phases using "models." (For descriptions of several instructional models, see "Teachers Do Make a Difference," *What's Noteworthy on School Improvement and Technology*, pp. 47-51).

There is a commonality to all these models--certain steps that must be included no matter what you do. These steps are detailed below.

Phase 1: Planning

Instruction begins long before the teacher steps up in front of the class to teach a lesson. Planning comes first. Teachers have time to become reflective and weigh alternatives in making decisions. This is a time to choose a general topic for teaching, choose a major objective within the general topic, and then match a more specific instructional objective for specific students.

Planning is often called the key to professionalism in teaching. In planning, teachers use their professional expertise to match ideas, activities, and materials with student interests and abilities. The result is an effective lesson that is tailor-made for its audience.

The research indicates a direct link between careful planning and academically successful students. A plan of action gives confidence and security. It reduces confusion, wasted time, and other factors associated with decreased learning.

Further, time management studies show that the more time spent in planning, the less time required for completing a project. Thus, planning can help teachers use precious classrooom time more efficiently.

Planning Tips for Teachers

There are four essential steps in planning for instruction:

1) Assess the student's current level of skills and knowledge. In other words, find out what each student now knows. Some form of a "pretest" can be useful for this purpose. Also assess each student's strengths and weaknesses.

2) Use assessment information to decide what skills or knowledge the students should learn next, and how the material should be presented. Every effort should be made to sequence the skills in some sort of hierarchy—if a student needs to know how to do "x" before "y" can be accomplished, then "x" must be next. In other words, what comes next?

3) Use planning as another stage at which materials can be organized to increase the probability of mastery. For example, identifying "chunks", parts or conceptual segments that can be learned separately, before they are integrated or reorganized into larger chunks.

4) Decide what standards will be used to indicate successful learning. What rate of success will be required to demonstrate mastery?

Effective teachers also:

- plan for interruptions and unexpected events. A game plan for emergencies helps teachers maintain order and minimize disruptions;
- use daily and weekly plans that fit neatly into larger unit and yearly plans;
- set aside a regular time for planning.

Phase 2: Teaching the Lesson

Experimental studies cited by Barak Rosenshine and others clearly demonstrate that certain teaching functions and strategies lead to increased student achievement. Researchers working with different teachers in other settings reached the same conclusions about effective and less effective instruction.

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McREL is a public, non-profit organization, funded in part by contracts and grants from the National Institute of Education (NIE). The McREL staff members who contributed to this folio are: C.L. Hutchins, Susan Everson, Susan Lynch, Robert Ewy, Robert Marzano, Helen Chapman and Barbara Kessler. Other contributors include: Linda Shalaway.

One of the most important findings to emerge is that students need to master content to the point of "overlearning." "Overlearning" ensures that students become confident with the material and less hesitant when applying it to new situations. "Overlearning" also helps students retain the material learned. "Overlearning" should be a goal for each step of the teaching process.

The research also stresses the need to sustain a high success rate in student responses as the student reaches the point of mastery. Teachers accomplish this by presenting material in small steps, directing practice by asking questions, allowing sufficient time for practice, "overlearning," and frequent review. Researchers recommend a success rate of above 60 percent for new material and 95 percent during practice (See the McREL Quality Schools Program Folio, *Time Management*, for more information on success rates).

Effective teachers also give immediate, specific, academic feedback to students. Immediate feedback reinforces correct answers and signals errors, giving students a chance to correct errors before they become embedded.

Tips for Teachers on Instruction:

There are four basic stages appropriate to teaching the lesson:

a) *Task Focus*. Get the students *set* to work; do it the most interesting way possible. Then tell the student(s) the purpose of the lesson; make sure the students know what the desired outcome is. Examples of acceptable and unacceptable finished work are exhibited. In other words, do the students know what they're supposed to learn. (Some teachers develop hand signals, such as thumbs up, their students can use to signal the teacher that they understand what they are supposed to be doing; this technique along with other "every pupil response techniques" can be used at several points in the teaching cycle.)

b) *Lesson Presentation*. The teacher presents the new concept or skills to the students. During the lesson the teacher and students *interact* constantly. The material is treated in various ways. Skills are modeled, information is provided in several *different modes or styles* (e.g., orally and in writing), strategies for accomplishing the task (such as strategies for memorizing) are explained, methods for checking accuracy are also presented. Be sure that all the skills needed to accomplish the task are present (see the McREL Quality Schools Program folio, *Expectations*, for more information on teaching to "multiple abilities").

c) Students then engage in *guided practice*; during this process teachers monitor and give continual, content specific feedback to students. (Remember when math instructors got everyone up at the board at the same time so they could simultaneously monitor everyone's work?) Success is checked or monitored. If they are not successful, alternative methods are tried. Enough time is provided for each child to be successful.

d) *Independent Practice*. Once the teacher believes that the student(s) understands what has been taught, time is allowed for the student to work alone. High rates of success should be characteristic of this phase of instruction. This practice is both "massed" and "spaced." In other words, the student experiences an intensive period of practice immediately following instruction. Additional practice and reviews occur at regular intervals: the next day before the next class session begins (this has been found particularly helpful in mathematics), once a week, and at appropriate intervals thereafter.

The research suggests the following additional strategies teachers can use in teaching the lesson:

- proceed in small steps at a brisk pace;
- give detailed instructions and explanations;
- provide many examples;
- ask many questions and provide ample practice;
- check for understanding;
- provide feedback and corrections, especially in the early stages of learning new material;
- divide independent assignments into understandable steps;
- monitor frequently during independent activities;
- allow practice until students achieve a high success rate and become quick, confident, and firm in their answers.

Phase 3: Assessment, Transfer, Reteach and Review

Teacher assessment of student learning brings the instructional process full circle. Assessment reveals what students have learned and retained. If a student adequately masters the material, it's time to move on. If not, the teacher must *reteach* the lesson using new strategies or methods. It is important not to reteach in just the same way the lesson was first taught; if reteaching is necessary, obviously, the first approach wasn't completely successful.

One part of the assessment step is to be sure that the student not only can remember the knowledge or perform the skill but that he or she can transfer that knowledge to other situations. Mastery learning advocates say that learning hasn't occurred until what has been learned can be *transferred* or applied to other situations. Although the assessment step provides the check that a teacher needs to be sure the skill or knowledge can be remembered and transferred, the action necessary to be sure transfer occurs must happen earlier in the teaching cycle. That is, the transfer or application of knowledge isn't something learned at the end of the learning cycle, it must be built into the earlier phases. For example, transfer is more likely to occur when plans have been made to teach concepts rather than facts. Thus, developing an understanding of "balance of power" will be more important for transfer to other situations than simply learning the names of the leaders of the various branches of the federal government. The reason concept learning is more likely to transfer than factual learning is because conceptual learning requires breaking a process or idea down into component parts and understanding how these parts work together. So, what you decide to have the student learn in the planning phase will affect later transfer. How the material is introduced and the instructional "set" is carried out also will affect transfer. For example, if the concept can be related to the

learner's existing frame of reference it is more likely to transfer. Practically, this requires making the learning as relevant to the student's personal life as possible. The better one learns the concept initially also affects transfer. Thus, helping the student to discover sequences or elements they can use to structure initial learning increases the probability of transfer. The concept of overlearning, mentioned earlier, also plays a role here: during the independent practice phase of instruction, identified above, students need to master the material to the point that they are sufficiently confident that they will apply it to new situations.

Periodic *review* is one of the instructional functions that is described in the studies of effective teaching. Research suggests that this function should be part of each lesson although it occurs later, days or even weeks after the teacher introduces new material.

Teachers can assess student learning with tests, student games based on the lesson content, individual student work, or group discussion and review. Whatever the means, the end result is the same: students get a chance to use their skills and knowledge so that teachers can determine just how much has been learned.

Assessment and Review Tips for Teachers

- use a variety of means for assessing mastery; don't limit your repertoire to paper and pencil tests;
- create opportunities for your students to demonstrate their mastery of an objective by applying their knowledge or skill to a new situation;
- schedule regular weekly and monthly reviews to check for student understanding;
- make sure all students participate in reviews; don't assess mastery on the basis of a few volunteer responses to review questions;
- if the objectives have not been mastered, reteach the lesson using alternative strategies and/or materials.

RESEARCH REPORTS

The research on instruction provides a base from which teachers can make decisions which will promote academic success for all of their students.

Planning

In studies of teacher planning at the Institute for Research on Teaching, Christopher Clark found that:

- teachers reported spending about 13 hours per week in formal planning;
- planning revolves around students and activities, seldom around learning objective, as teacher educators suggest it should;
- planning is more explicit and involves a longer lead time in team teaching situations than in self-contained classrooms;
- planning not only helps teachers organize instruction, it gives them direction, security, and confidence;
- teachers undergo a four-step process when deciding whether or not to use an activity in their classrooms. First they try to understand the activity; next they imagine using it in their classroom; then they think of ways to avoid foreseen problems by modifying the activity; and finally, they create a mental image of the revised version.

Another planning task stressed in the research is assessing students' prior learning. Benjamin Bloom reports that the extent to which students have learned the basic prerequisites to the lesson being taught accounts for about 50 percent of the variation in student achievement during that lesson.

Teaching the Lesson

Most of the effective teaching research focuses on active teaching; that is, presenting a lesson or activity to students.

Barak Rosenshine, University of Illinois, has reviewed the major studies of effective teaching and identified the features of successful instruction common to each. He has organized these features around six "instructional functions." In chronological order they are:

- daily review;
- presentation of new content or skills;
- guided student practice to check for understanding;
- feedback, correctives, reteaching;
- independent practice;
- periodic reviews.

Rosenshine says that these are the functions successful teachers perform which are consistently related to higher student achievement and higher academic engaged time.

The instructional functions listed above and research findings listed below are based on seven major experimental studies: 1) Texas First Grade Reading Group Study (Anderson, Evertson, and Brophy), 2) Missouri Mathematics Effectiveness Study (Good and Grouws), 3) Texas Elementary School Study (Evertson, Emmer et al.), 4) Texas Junior High School Study (Evertson, Emmer et al.), 5) Organizing and Instructing High School Classes (Fitzpatrick), 6) Exemplary Centers for Research Instruction (Reid), and 7) Direct Instruction Follow-Through Program (Becker).

Daily Review

- daily review and checking of previous work assures that students have the necessary prerequisite skills to move on to the next lesson;
- less effective teachers review and check homework only 50 percent of the time, compared to 80 percent for effective teachers.

Presenting New Content and Skills

- effective teachers spend more time demonstrating concepts and skills than less effective teachers;
- problems occur when teachers give insufficient directions and explanations, assume children understand the material without checking, and introduce more complex material before earlier content has been mastered.

Feedback, Correctives, and Reteaching

- effective teachers teach new material in small steps to lessen student errors and misunderstanding

Guided Student Practice

- effective instructors offer teacher-led practice until students are confident with the new material;

- a high frequency of teacher-directed questions is important. Effective elementary teachers ask about 24 questions in a 50-minute mathematics period, compared to about nine from less-effective teachers;
- effective teachers spend more time than others in guided practice, asking questions, correcting errors, and repeating new material;
- elementary students need a great deal of practice;
- many opportunities for students to respond are important at any level (for example, frequent quizzes in college);
- a high student success rate is also important. High success rates are correlated with achievement grains;
- effective teachers facilitate practice to the point of "overlearning";
- frequent assessments of whether *all* students understand the content are necessary;
- in small group instruction, calling on students in ordered turns works best (when learning *basic* material);
- student group response (in unison) allows a high frequency of responses in a minimum amount of time. This works best in small groups, where the teacher can monitor individual responses;
- effective teachers respond to quick student answers by simply asking a new question and thus maintaining lesson momentum;
- correct but hesitant student answers require some process feedback, such as explaining again the steps used to get the correct answer;
- incorrect answers due to carelessness simply require a correction before proceeding;
- incorrect answers due to lack of knowledge indicate a need to 1) probe for answers by providing clues, or 2) reteach the material.

Independent Practice

- independent practice is necessary for students 1) to begin putting separate skills together to accomplish one task, and 2) to become "automatic" in their responses;
- independent practice allows students to learn to the point of "overlearning," when their responses become rapid and firm. This is the point at which new material is retained;
- most independent practice occurs during seatwork or homework. It can also occur in cooperative groups where students drill each other.

Periodic Review is discussed in separate section labeled "assessment."

Assessment

In his review of research on effective teaching, Barak Rosenshine reports that:

- Periodic reviews—monthly and weekly—reveal areas where students are weak and allow for reteaching in these areas;
- Reviews also reveal if lesson pace has been too rapid (if students consistently have trouble learning the material);
- Periodic reviews allow students to retain material better because they master it to the point of "overlearning."

Instructional Models

Instructional models are based on the findings of various studies and the work of several researchers.

When studying effective methods for teaching basic skills, Barak Rosenshine found that:

- Students taught with structured approaches do better learning basic skills than those using individualized or discovery learning approaches;
- Students who receive direct instruction from the teacher achieve more than those who are expected to learn on their own or from each other.

Additionally, when studying instruction, Jere Brophy, Institute for Research on Teaching, found that:

- most forms of "open education" and "individualized instruction" involve unrealistic expectations about how well young students can manage their own learning. Young students frequently don't understand what they are supposed to do or learn in school;
- teacher lectures and demonstrations are important, as are recitation, drill, and practice;
- if cognitive achievement is the goal, interactive, teacher directed instruction is clearly superior. *But other instructional approaches may be more appropriate for growth in non-cognitive areas.*

"Active teaching" is a term Thomas Good of the University of Missouri uses to describe effective instruction. In studies associating "active teaching" with increased learning, Good found that:

- structured programs produce greater student achievement than open programs;
- higher achievement gains are associated with orderly classrooms, persistent attention to academic tasks, teachers' active involvement with students, and a well-organized learning environment;
- lower achievement gains are related to students socializing and misbehaving, students choosing their own activities and seating arrangements;
- teachers who work with individual students for extended periods of time or on clerical tasks while students work have lower student achievement in their class;
- an increase in "active teaching" is associated with higher achievement across subjects and grade levels;
- lower-ability students and those who are anxious or dependent need more structure than others.

On the other side of the coin, there is evidence to suggest that *"direct instruction" is not best in all situations.* Researcher Jane Stallings found that:

- Students from highly structured classrooms take responsibility for their failures, but attribute their success to the teacher or other forces. Students from more flexible classrooms take responsibility for their successes but not their failures.
- Students in "open" classrooms are absent less, indicating a more positive attitude toward school.
- Independent behavior and cooperation are more likely found in situations where students select their own seating and grouping arrangements part of the time, choose from a variety of activities, and have access to an array of audio-visual and explanatory materials.

Further:

- Jane Stallings found that student time spent working in small or large groups is positively related to achievement;
- Fixed groupings of students by ability produces some unfavorable results. Eugene Howard of the Colorado Department of Education reports that ability grouping: 1) decreases achievement in low or average-ability groups, 2) reinforces favorable self-concepts in high groups and unfavorable self-concepts in lower groups, 3) deprives lower achievers of the stimulation of working with high achievers, and 4) carries a stigma more debilitating than the one of being a poor achiever in a heterogeneous group;
- Elizabeth Cohen of Stanford University also found evidence of the deleterious effects of ability grouping. Ability grouping, she reports, reinforces the negative self-images and low expectations held for lower-achieving students;
- Team learning approaches, where students compete in multi-ability groups, is clearly associated with increased achievement. (See the McREL Quality Schools Program folio, *Motivation*, for more information on team learning.)

Summary

Instruction is what teaching is all about. There are obvious differences among teachers based on personal style, preferences, and experience. But there is a vast body of knowledge demonstrating that all teachers should incorporate certain principles and techniques into their instruction to increase student learning and their own teaching effectiveness.

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ON THEIR OWN

Teachers recognize the value of students being "on their own" or working independently. There are several strategies teachers can use to increase independent learning:

At the primary level teachers should discuss the idea of working alone with children, giving them examples of independent working procedures, describing the teacher's role when they are working alone, identifying problems that may arise, seeking alternative solutions to solving the problem in advance, evaluating the usefulness of these alternatives, setting up routines for early finishers, debriefing students on their success at solving problems that arise during independent learning, providing reinforcement for independence, demonstrating the use of delayed response, and reviewing the procedure.

At the intermediate level, it is best to preface independent learning with an assessment of students' previous experience at working alone. (Refer to "Survey of Student Knowledge of Independent Learning" in Summer, 1981, *Noteworthy*) If a majority of students show limited knowledge of independent learning, take the time to teach the *student role*, the *teacher role*, and *work boundaries*. You may also want to distinguish between the following different types of independent work: 1) guided study, 2) cooperative planning, and 3) individual pursuit.

At the secondary level, a "learning contract" to help clarify your students' understanding can be used. Use the following checklist to be sure the "contract" is as comprehensive and helpful as possible:

1) Clarify what is to be learned.

2) Spell out how the skills/knowledge acquired will be demonstrated.

3) Identify the resources needed.

4) Set up the major steps/tasks to be completed.

5) List the checkpoints to measure progress.

6) Establish deadlines for completion of the contract whole and sub-parts.

7) Point out the next activity to be done.

We trust that with your guidance and their success, they'll look forward to "going it alone" again. (See *On Their Own* in Summer, 1981, *Noteworthy*, for further hints and explanation.)

Coaching Coaching Coaching Coaching Coaching Coaching Coaching Coaching

A Powerful Strategy for Improving Staff Development and Inservice Education

Why Coaching?

Staff development activities frequently are handled like a visit to the doctor. After an injection or a few pills in the form of a one-day inservice on a hot topic, the patient is expected to improve. Enthusiasm runs high, everyone has a good time and there is hope that things will get better. Unfortunately, the initial enthusiasm and commitment dissipate rapidly as the teachers re-enter the classroom, face the daily routine and have little time or support for thinking about or practicing new skills or techniques.

Clinical supervision is an improvement on this the traditional inservice approach. The principal regularly works in the classroom, observes the teacher's efforts to improve, models the desired behavior and gives feedback and support. Principals are only human, however, and they have the same pressures of getting through the day and meeting all the responsibilities they had before, with no time for their new assignment.

An alternative (or a compatible, additional) strategy to clinical supervision is "peer coaching": teachers meet in small groups and observe each others' classrooms to get feedback about their own teaching behaviors, experiment with new improved techniques and get the support they need.

Coaching, as a strategy for staff development, emerges from recent studies on the effectiveness of inservice education. Bruce Joyce, Judith Warren Little, Tom Bird, Beverly Showers and others have stressed the idea that people develop mastery and application of new skills best when they are placed in coaching situations.

Figure 1 shows how coaching enhances other adult learning strategies. For example, if only the traditional lecture approach is used, very low classroom application results. Even when demonstrations are added, relatively little long term impact results. Only the addition of coaching to the other techniques produces high levels of knowledge mastery, skill acquisition and classroom application.

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Figure 1
TRAINING EFFECTIVENESS*

The degree of proficiency attained in knowledge, skill, and application is determined by the FIVE STEPS of the TRAINING DESIGN.

TRAINING STEPS	TRAINING STAGES		
	Knowledge Mastery	Skill Acquisition	Classroom Application
THEORY (Lecture)**	Middle/High	Low	Very Low
+			
DEMONSTRATION	High	Low/Middle	Very Low
+			
PRACTICE & FEEDBACK	High	High	Very Low
+			
CURRICULUM ADAPTATION	High	High	Low/Middle
+			
COACHING	High	High	High
+			
PERIODIC REVIEW	High	High	High

Key: Very Low = 5%
Low = 10%
Middle = 40%
High = 80%

* from Bruce Joyce

** Note: the rows are cumulative; the strength of coaching rests on the total effect of theory, demonstration, practice, curriculum and coaching.

What is coaching?

What is meant by coaching; what is it? At a common-sense level coaching involves what a good athletic coach does; it:

- Allows the student/learners to set their own goals (a good coach would never force a student into basketball if his/her real interest were in track);
- Breaks complex skills down into small units that can be learned (a basketball coach will have a student practice one skill, such as dribbling, at a time);
- Provides an expert model of the integrated behaviors involved;
- Allows for ample guided practice when the coach checks the behaviors and provides corrective feedback (athletic departments have learned the value of videotape for providing clear feedback to students);
- Encourages independent practice to build skill integration, automatic response, speed and accuracy;
- Praises and rewards students when they win; reassures and supports them when they don't (there are even sports psychologists now who help individuals and groups with their emotional responses to a variety of athletic situations).

Coaching for teachers (or for students) is not much different.

What are the elements of coaching?

Coaching consists of two elements: (1) an organizational arrangement consisting of a support group, and (2) peer observation.

Before we describe the elements, keep in mind the general atmosphere that must exist if coaching is going to work.

- There must be a general perception on the part of the people involved that they are good but can always get better; they can always improve what they are doing. This general orientation has been found to characterize effective schools.
- The teachers and principals involved must have a reasonable level of trust developed. They are confident that no one is going to distort the situation into a punishing one. As Tom Bird says, "There is a way of talking and acting which separates the question of practice and its consequences from the question of people and their competence, and which separates habits from self-esteem. Then, the practices and habits can be put on the table and dissected while the person who uses them remains intact."
- There must be an interpersonal climate in the building that conveys the sense that people care about each other and are willing to help each other.

If these preconditions don't exist, they must be the initial focus of an improvement effort. Coaching can be used to build such conditions if it is approached slowly, voluntarily, and in a non-threatening manner. It can't be started out in its full blown form if these conditions don't exist.

1. **The Support Groups**

The support group consists of three or four coaching teams. Each coaching team consists of two or three teachers who observe each other. Although a two-person team is satisfactory, sometimes three people are better because a third person added to the group reduces the effects of personality conflicts. Thus, the support group consists of from 6-12 people (nine or less would be best) organized into three teams.

The purpose of the support group is to provide professional stimulation, practical help based on the expertise of other teachers and personal support to those who are trying to improve their teaching.

Support groups meet on a regular basis, for example, every two to four weeks. (In between support group meetings, members of the coaching teams meet and carry out their peer observations.) Suggested topics for support group meetings would be as follows:

- Develop a mutually agreeable agenda, including a delineation of issues and concerns to be discussed, how much time will be spent on each problem and the priority that will be given to each.
- Review progress from the last meeting, including feedback from team members who were observed since the last meeting. (It is best if the person who was observed initiates this discussion and describes what he or she tried and learned; that person can involve the peer observer if desirable.) During this part of the meeting and throughout the entire process it is important that no judgments be expressed by others or advice given that is not solicited.
- Identify new teaching behaviors and activities on which individual participants or coaching teams will work before the next support group meeting. Problems should be stated as behaviorally as possible (e.g., "I want to reduce the number of oral outbursts from one of my children"). The person identifying a problem should be asked to clarify it by answering questions about how the problem occurs, when it occurs, what he or she is trying to accomplish, what has already been tried, etc. Other teachers should be asked what they have done that worked in similar situations. Avoid advice-giving; just describe what worked for you. (In McREL's Effective Schools Program, the new "problems" usually are assignments to try out new teaching strategies. For example, teachers may be asked to observe each others' classroom regarding student engaged time, new discipline methods, or an innovation like team games. In these situations the support group discussion might focus on the particular assignment, what it calls for and how best to carry it out. The team might also decide to seek ideas for improvement from sources beyond the experience of the group. In this case individuals might agree to identify ideas, programs or other resources that can be brought back to the group. There are many places teachers can turn to for help: a local or state teacher center, the state National Diffusion Network Facilitator, the nearest regional laboratory such as McREL, a college or university, ERIC, or a host of professional publications such as *Educational Leadership*.)
- Finally, the meeting should have closure. Actions that have been decoded upon should be summarized and those who have agreed to do something before the next meeting should commit themselves to taking action.

The work of the Support Group will be more effective if a facilitator and recorder are selected to organize and conduct the meeting. The facilitator is like a chairperson or moderator; he or she makes sure the meetings begin on time, that the agenda is developed with everyone's involvement, that everyone contributes, that no judgments are made and that the meeting is adjourned on time. The recorder uses newsprint to keep a record of the proceedings so that the next meeting can begin where the last left off and so that the agenda and action items are clear to everyone.

From time to time the group should also discuss the coaching process itself. The focus should be on the value of the process ("What helped you the most?"), particular strategies that worked well ("What things did the "coach" do that were most helpful?") and things that could be improved—this might be better handled by the coaches describing their experiences as coaches rather than teachers talking about their concerns as observers. Agreement to continue the process and institutionalize it should be an important purpose of this discussion.

2. **The Coaching Teams**

The work of the coaching teams consists of the following.

Discussion and Planning—(Pre-observational Meeting) Once the improvement focus which the team or individuals in the team are going to work on has been decided, members of the coaching team must develop a clear understanding of what specific behaviors or actions must take place to implement the desired changes. They must be sure the two or three team members understand the desired outcome or purpose of the activity and the specific steps that must take place to ensure that it is implemented. The situation will be different if each team member is working on their own, individual plans than if the team is working on something together.

At the heart of the discussion must be a clear delineation of the actions that the observer is supposed to record. The actions should be defined as behaviorally as possible. Developing an observation checklist is a good way to do this, depending on the specific innovation involved. For example, if one were trying to implement "Student Team Learning"* in the classroom some of the items on the checklist are described in the accompanying box.

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* See McREL's *Noteworthy*, Summer, 1981, for a discussion of "Student Team Learning"

SUGGESTED CHECKLIST FOR OBSERVING THE IMPLEMENTATION OF STUDENT TEAM LEARNING

- The teacher explains the activity and checks students' understanding.
- The teacher assigns the students to learning teams of 3-5 in size so that each team contains students of different levels of attained skill or performance in the subject area. Each team, therefore, is composed of a high performer, a low performer and one to three students with mid-range performance.
- The teacher clearly explains the assignment both orally and in writing. S/he checks for understanding. S/he provides the students with a model of the desired performance and a list of resource materials that should be used or consulted to develop mastery of the materials.
- The teacher follows up with the groups during the period of independent work by providing them with a diagnostic tool to ascertain how they are doing, and coaching them about their interpersonal-group productivity.
- The teacher regroups the students into competitive teams following the study period (usually 3-4 days after the assignment has been given). The competitive teams are homogeneously constructed. That is, the competitive teams are formed so that the highest performers will compete among themselves in groups of 3-5; the lowest performers will compete among themselves, etc.
- During the competitive "testing" students will be provided with appropriate materials: e.g., a deck of cards for randomly distributing the order in which questions are asked, a set of objective questions, and an answer key.
- The teacher explains the competitive process, checking for understanding.
- The teacher provides one or two rounds of guided practice.
- The teacher lets the groups independently compete, walking around and providing assistance during the process as necessary.
- The teacher properly scores each team's work, announces the outcome, and supports students by helping them understand that work, not luck, was the reason for success and that Student Team Learning increased the opportunities for everyone to be successful.

Having such a checklist has two obvious advantages. It provides the person learning the activity with a clear understanding of what is expected and it provides the coach or observer with a clear, objective list of things to watch for.

Observation. Once everyone is ready, the teacher scheduled to conduct the observation does so. (If three teachers are involved, Teacher A observes Teacher B, who observes Teacher C, who observes Teacher A.) Students are prepared for the observation. For example, you might tell the students "Mrs. Smith, Mr. Ortega and I are working together to develop some activities that we think might help you learn more effectively. Mr. Ortega will be in the room tomorrow observing us as we try out a new way to develop group or team learning; he will be helping me decide how well it works. Please don't pay any attention to him. He will just be sitting in a chair up here in the corner making some notes. He won't participate in our work."

During the observation the observer should look only for the behaviors or activities that were agreed upon. The observer is not in the room to evaluate or pass judgment on the teacher. He or she should simply check to see what happens and record what is observable: "You did this . . . and then they did this. . . ."

If a detailed checklist has not been developed for the "coach" or observer to use to document what transpires in the classroom, a detailed log or script of what transpires should be kept. If complex student-teacher interactions are involved a tape recorder or, perhaps, even a videotape recorder might be used.

The use of a log or script helps avoid misunderstandings. It enables the coach to say things like: "After you corrected Johnny I watched him closely for the next few seconds. What he did was. . . ." This approach avoids making a value judgment such as: "You really weren't successful with Johnny because. . . ."

A check sheet or other instrument (such as McREL's Academic Efficiency Instrument) helps keep the feedback session objective as well. For example, it might enable the coach to say: "I measured your students' 'engaged rates' as you asked me to and here are the data I collected for 20 minutes." The more specific the teacher has been about what s/he wants the observer to watch for and record, the less threatening it is for both parties.

Feedback. As soon as possible after the observation period has ended the observer (coach) and teacher should meet to discuss what happened. This can be done with the third member of the team present or not—most prefer just a one-on-one between the observer and teacher. (It would be best if the principal did not attend this session unless s/he has been involved in the observation or unless the observed teacher wants the principal there.)

During the feedback session the discussion should be as objective as possible. It is usually best if the person being observed leads the discussion so the coach isn't in the position of pressing his/her view on the teacher. For example, the session might begin by having the coach ask the teacher: "Why don't you tell me how you think it

went—what went right or what went wrong and I'll share with you information that supports your own thoughts as well as things I might have seen that you didn't see." Usually the person observed has a pretty good idea of how things went and can save a lot of time and awkwardness by pointing out what he or she already knows. Then, the coach can say, "Why don't we just go down the checklist" (or whatever instrument was used) "and ask me for information about what I saw."

Thus, the observed teacher might go through the checklist and ask informational (rather than judgmental) questions: e.g., "What did you see when I was checking for understanding? Could you see any students who had problems I didn't address or did you see any of the students give signs (e.g., non-verbal signs) that they didn't understand even after I re-explained things to them?" If the person observed keeps pressing for information it will make it easier for the coach. Then, at the end of the discussion the coach should be asked if there were other observations made that would be relevant.

One of the absolute essentials in coaching is to be sure the relationship between the coach and the teacher is as professional as possible:

- Never talk to a third person about what was specifically observed.
- Don't let a member of the team draw the others into personal problems.

At the next support group meeting the facilitator should ask the person observed what happened, what was learned, etc. The facilitator should never ask the coach to comment. Only the person who was observed can bring the coach into the discussion; and, if he or she does not, the coach should not volunteer anything that was seen during the observation.

How do you implement the coaching process?

Attending to the process used to implement a coaching system is almost as important as the coaching activity itself. Without proper concern for the implementation process the effort to improve the staff development program probably won't succeed.

Here are some suggestions for setting up teams:

- The building principal should endorse and encourage the forming of the coaching teams and support groups.
- Coaching teams should form naturally from small groups of people who like and respect each other. (The principal may need to initiate some suggestions for membership to be sure all those who want to participate are included.)
- People who don't want to participate shouldn't be forced to participate although they should be encouraged to sit in on a team if the team is comfortable having them do so.
- Specific expectations about the number of observations and coaching follow-up sessions should be established at the beginning.
- Specific times should be set aside for the observation and follow-up sessions.

At a broader level, you may want to think about the implementation process by drawing a parallel to the steps suggested by figure 1; i.e., providing a theory orientation and demonstration of coaching with a practice and feedback stage. Thus, a sequence for implementing a coaching process would be to:

- Provide an orientation to the process and the theory by discussing the idea at a staff meeting; this article could be distributed as background reading.
- Demonstrate the process through role playing or by showing McREL's videotape on coaching.
- Give the staff an initial opportunity to practice coaching using a simple procedure such as McREL's process for measuring academic efficiency. Under such an arrangement the initial support group session would be used to introduce the process. Everyone would practice making observations and the follow-up support group sessions would focus on a discussion of the nature and value of what occurred.
- Modify the process for conducting peer observations to satisfy the unique nature of your school and staff; and
- Follow up with coaching sessions on the coaching process.

Another model for approaching the implementation process is provided by the "Concerns-Based Adoption Model" (CBAM), developed at the University of Texas. It provides an empirically valid model of how implementation works. Basically it suggests that while implementing a new behavior or set of skills people go through very predictable stages. At each stage implementors express different kinds of concerns and have different information needs. The seven stages of concerns are:

If you think about how teachers would approach the implementation of coaching to improve staff development, you can easily imagine how their concerns would follow in the order suggested by Figure 2. First they'd want to know what it was and what it's supposed to do. But, soon, they'd worry about whether they would be embarrassed by teaching in front of their peers, whether it was really a subterfuge for personnel evaluation, whether they could work well with members of their peer team, etc. During this period it would be very important for the principal to provide support and information that is directly related to these concerns and not push too rapidly into the observations.

Once teachers have moved beyond the personal level of concern they would want much more information about the innovation. Once teachers have tried the coaching innovation and are using it at the "mechanical level", they will want to know if it is producing the promised results.

The CBAM stages of concern are a great help to the person responsible for leading the implementation/change process. The model tells him or her how to assess process along. For example, by asking participants what their concerns are and by listening carefully a leader can usually identify the stage of concern. It is essential that the leader focus on that level of concern. If the leader ignores the messages and moves ahead, the implementation process may be disrupted.

Figure 2

STAGES OF CONCERN ABOUT THE INNOVATION*

0 AWARENESS: Little concern about or involvement with the innovation is indicated.

1 INFORMATIONAL: A general awareness of the innovation and interest in learning more detail about it is indicated. The person seems to be unworried about her/himself in relation to the innovation. S/he is interested in substantive aspects of the innovation in a selfless manner such as general characteristics, effects, and requirements for use.

2 PERSONAL: Individual is uncertain about the demands of the innovation, her/his inadequacy to meet those demands, and her/his role with the innovation. This includes analysis of her/his role in relation to the reward structure of the organization, decision making, and consideration of potential conflicts with existing structures or personal commitment. Financial or status implications of the program for self and colleagues may also be reflected.

3 MANAGEMENT: Attention is focused on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organizing, managing, scheduling, and time demands are utmost.

4 CONSEQUENCE: Attention focuses on impact of the innovation on students in her/his immediate sphere of influence. The focus is on relevance of the innovation for students, evaluation of student outcomes, including performance and competencies, and changes needed to increase student outcomes.

5 COLLABORATION: The focus is on coordination and cooperation with others regarding use of the innovation.

6 REFOCUSING: The focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative. The individual has definite ideas about alternatives to the proposed or existing form of the innovation.

* Original concept from Hall, G.E., Wallace, R.C., Jr., & Dossett, W.A. "A development conceptualization of the adoption process within educational institutions." Austin: Research and Development Center for Teacher Education, The University of Texas, 1973.

The Role of the Principal

The principal is a key actor in creating the conditions and incentives that will support the development of a coaching system for staff development. For example, he or she must take responsibility for creating the conditions mentioned at the beginning of this article (the belief that everyone can improve, a high level of trust, and an interpersonal climate of caring and support).

In addition, s/he must work to actively create a sense of collegiality in the building. This term has been used by Judith Little to describe the characteristic she found in successful schools. By the term collegiality she means an environment in which the norm or expectation is that the staff will work cooperatively to exchange information and support one another to improve instruction. For example, informal conversations occur in the staff lounge or elsewhere that focus on school improvement. Staff meetings devote time to improvement rather than to housekeeping matters and "administrivia." Teachers visit each other's classroom and the principal spends a significant amount of his or her time interacting with teachers about instructional matters.

How does the principal do this? (See Figure 3 for a more complete statement of the steps listed below).

First, the principal must *announce* his or her expectation that collegiality and coaching is a part of the school's values. He or she must explain what is meant by the terms, examples of how they already exist and how everyone can contribute to building collegiality.

Second, the principal must model the processes; this might be done by inviting discussion of some of his/her own activities, encouraging suggestions for improvement and, perhaps, by inviting another principal to act as a coach to him or her.

Third, the principal must sanction or reward the desired behavior by giving teachers credit and recognition for their efforts and spreading news of what's happening.

Fourth, the principal must defend those who are taking the risks to spread the sought-after practices. He or she can provide the rhetoric that defends the approach, publicize it with the central office and secure its approval.

In addition, the principal is responsible for arranging for the logistics of coaching: setting aside the time for the support meetings, facilitating the time for the team observations and generally being available to troubleshoot the process and provide assistance when requested.

It will probably be best if the principal does not actively participate in the support group meeting or the team meetings unless his or her help is specifically requested. In the initiation of the process, particularly the demonstration stage, he or she might be more visible. It will be best, in the long run, if the principal works to create a self-sustaining coaching system among the teachers themselves. Whatever else, the principal must avoid making judgments about teacher performance as part of the coaching process.

FIGURE 3

MANAGEMENT TACTICS FOR SCHOOL IMPROVEMENT PRIORITIES

RANGE OF INSTRUCTIONAL LEADERSHIP PRACTICES	PRACTICE THAT *PERMIT* TEACHERS' NORMS OF COLLEGIALITY AND EXPERIMENTATION		PRACTICES THAT *STRENGTHEN* OR *STIMULATE* TEACHERS' NORMS OR COLLEGIALITY AND EXPERIMENTATION		
Announcing expectations	Describe, explain it to teachers who ask	Add it to a list of "things we've got going this year" during the first faculty meeting	Announce that some teachers have been exploring some well-tested ideas and will be trying them out with your (principal) encouragement	Announce that you and some teachers have formed a small team to test some worthy ideas, will keep everybody posted on the trials and tribulations, and that the effort can be expected to require a chunk of principal's time	Announce that a practice is sound enough that all are expected to use it
Modeling or enacting (plan for observations or assist with it)	Arrange time, materials, and assistance for teachers to plan Arrange for consultant observation/ conference with teachers	Review teacher's plans Join consultant in observation and conference	Plan with teachers a sequence of implementation Conduct regular meetings with teachers to hear how it's going	Plan with teachers for course units, lessons, and materials Conduct regular classroom observations of at least 50 minutes using clinical supervision cycle	Plan with teachers to refine, adapt, etc., in the face of difficulty Cover classes so teachers can observe one another
Sanctioning (rewarding it)	Provide teachers access to materials, assistance, time, university credit	Spread news of progress in informal contacts with other teachers, administrators, school board members, etc. (fame)	Offer an altered teacher/principal relationship stressing collaboration	Offer specific feedback on progress based on discussion and observation	Invite teachers to act as consultants outside the school
Defending or Protecting	Leave disinterested teachers a graceful way out in early stages	Read enough and talk enough to be able to lay out the rationale for the approach	Find ways to support other teachers who display initiative	Accumulate "practical" instances of how the approach looks in the classroom and what the effects are	Arrange for teachers' involvement to satisfy other district requirements

Escalating effects

Adapted from Judith Warren Little's *School Success and Staff Development*. Center for Action Research, 1981.

Escalating demands

A Description of
The Mid-continent Regional Educational Laboratory's

Effective School Program (ESP)

OVERVIEW

The Effective Schools Program (ESP) is a systematic, staff development program designed to foster self-sustained improvement efforts at the school building level. The ESP is research based. It synthesizes research findings on effective teaching and instruction, on effective schools, on effective building leadership and organization, and on curriculum and assessment. Equally important, the staff development processes used are based upon research findings in the areas of planned change and adult learning.

Goals and Objectives

The goals of the ESP are:

- to provide successful learning opportunities to *all* students who attend school; and
- to develop and/or enhance a school improvement process which is continuous cooperative and self-renewing.

To accomplish these goals, ESP bases activities on objectives designed to help participants:

- gain knowledge about the effective schools and teaching research;
- master diagnostic procedures to compare their school with the characteristics of an effective school, as described in the research;
- select alternative strategies to improve performance in areas of need indicated by the analysis of diagnostic procedures;
- implement the relevant strategies;
- develop an assessment system to document improvements in student achievement and other performance outcomes resulting from ESP activities.

THE ESP APPROACH—THE "HOW"

Orientation. Initially, McREL staff members meet with key decision-makers in the district. At this time, a variety of strategies to share information can be used as first steps; presentations, meetings, and written documents are examples. The purpose of the orientation process is to build commitment and ownership to ESP and to provide a professional perspective in which educators with varying levels of knowledge and expertise can work toward a common goal. This professional perspective differs from a strictly consultive arrangement because each player—McREL's staff members, central office administrators, board members, building level principals and teachers—are expected to bring expertise and information to the effort, rather than an external consultant dispersing all of the necessary information. This sets a framework for the next phase which is Program Planning.

Program Planning. Once the framework has been set, McREL staff and school district representatives plan the future collaboration jointly. The meeting schedule, participant selection, materials development, and assessment activities are examples of the topics which this planning team addresses. The key issue of joint planning is the melding of the McREL-ESP requirements with the individual needs of each district. Thus, negotiation becomes a natural part of planning team discussions.

It is important to note there are some ESP requirements McREL staff will press for in order not to damage the success of the effort. These requirements include:

- Team size from one building should be fewer than nine: 4-5 teachers and the principal are best. Leadership teams and large committees are not the same. Leaders must work together to manage problems, make decisions, supervise change, and assess success. Too large a group cannot develop the unity needed to carry out these leadership functions.
- A maximum of fifty participants can attend each leadership team training session. That would mean, for example, 9-10 building level teams of 4-5 each. The interactive nature of activities and the need for group discussion demands the total group remain a manageable size.
- Central office support is essential. A single school building staff wanting to participate without the support of its central administration has little chance of carrying out the changes which are necessary to produce results. Questions of curriculum, testing, grading, and evaluation are examples of critically important program topics which are not specific to individual buildings.
- Leadership development training days must be spaced four to six weeks apart. The wealth of information is overwhelming to the participants if introduced all at once. Participants use time between sessions to reflect, use activity suggestions, assess needs and observe instruction.
- Leadership team members must administer the diagnostic instruments that are part of the Effective School Program. Diagnosis is an integral part of all aspects of the program.
- The membership on the leadership team must remain constant. Team members must attend all the sessions unless an emergency interferes in which case, no substitutions are suggested. The unity of the team is, again, the issue.
- McREL staff returns the diagnostic instrument profile to the leadership team. The team members decide if they want to share the information and if so, how they will do so. Central

office administrators and the building teams do not automatically have access to the diagnostic information of the team.

Leadership Development. The core of the ESP is the development of building leadership teams. The team develops or enhances its leadership skills so it can guide site-specific efforts to implement the research on instructionally effective schools and classrooms. The ESP approach to this leadership includes:

Information Presentations. These activities are used to establish a common understanding of the literature base for effective schools and teaching, curriculum and assessment, building level leadership and organization, and school change. Common knowledge about the content is essential for any decision-making team. Using video tapes and other prepared materials team members will develop the capacity to conduct their own presentation at the school level.

Demonstrations. The McREL-ESP staff models various leadership behaviors for the teams. Problem-solving, decision-making, supervising, "coaching" and team building are included. Additionally, the McREL presenter demonstrates the use of instructional methods, observation techniques, and other strategies for implementing improvements that the team may choose to use with their own staff.

Materials Support. McREL provides materials and resources which support the leadership teams as they plan and make decisions about implementation strategies.

Feedback. Just as teachers need feedback ("coaching") while trying to enhance their instructional skills, the leadership team members need feedback as they carry on their work. The McREL-ESP staff members provide a sounding board, by planning with, talking with, and giving feedback to leadership team members.

Planning. Traditionally many educators have viewed planning as an activity to complete for someone else. Teachers plan for principals, who plan for the central office administrators, who plan for the board of education or state department staff. Planning by the leadership teams is an activity they carry out for themselves. The plan is a guide for their own work as building leaders. It is important to note they alone do not develop a school-wide, school improvement plan. Instead, they may include as part of their plan an objective to develop a school-wide plan. The first activity under such an objective would be to get the rest of the building staff involved in the process. If any positive movement is going to occur, the leadership team must *lead* the building in that direction.

Facilitation and Team Building. A school's sense of collegiality can be created or enhanced by the actions of the leadership team. McREL staff members present suggestions and disseminate resources for the teams to use with their full faculties to build a team approach to change and growth. In the long range the most important outcome of the ESP will be a new sense of collaboration and cooperation among staff members.

The key issues in the McREL-ESP leadership team development, then, are the provision of high-quality, substantive information based on research skill development in the use of specialized diagnostic instruments, and the provision of realistic suggestions for implementation of that information in the real-life environments of schools and classrooms. Further, the McREL-ESP staff believe that the leadership team members are able to make decisions and carry out plans when appropriate information has been shared. This important belief positively influences the relationship between the McREL staff and the ESP participants, i.e., a relationship among professionals working collaboratively for the improvement of education opportunities for all students in a school building.

The Long-Term Relationship. Ideally, the Laboratory's relationship with ESP participants continues from one to five years. During the first year, which is basically an assessment, planning, and leadership development year, the Laboratory staff members guide the process and are directive in choosing the topics and activities which are addressed by the leadership teams. Following that first year, the McREL role changes and the McREL staff members become resource/support personnel who are responsive to directions and requests from the school teams. For example, in this role the staff member visits schools, to meet with leadership teams in review sessions, provides feedback of plans and activity reports, connects teams from different districts who want to talk with one another about mutual concerns, and disseminates research and resource materials which are pertinent to the plans and activities of each leadership team.

The key issue of the long-term relationship is the establishment of a continuous feedback and resource support system. That system provides the leadership teams with a mechanism through which evaluation, renewal and revision activities can be developed. Those activities are critical elements in successful long-term improvement efforts. Without evaluation, renewal and revision, the impact of school improvement activities is short-term and superficial at best.

If possible McREL encourages the development of this long-term relationship by helping to build the capacity of a nearby state education agency, university or service agency to provide the necessary follow-up. If this approach is possible, it needs to be built in from the beginning of the program.

PARTICIPANTS (THE "WHO")

The development of the building level leadership teams is a critical element of the ESP. Each leadership team represents a school building and is composed of teachers and the principal from that building. Teachers typically are drawn from the building's various grade, content, and specialist areas. Through the McREL-ESP, team members become leaders in

fostering school collegiality, carrying out the tasks of identifying school goals and priorities, designing a leadership team plan, selecting activities leading to increased effectiveness, and assessing their own progress in implementing changes.

Specific information regarding ESP team participation includes:

1. The principal must *always* be a team member, attending every session, participating fully.
2. Teams should never be larger than nine: eight teachers and the principal. Normally, elementary schools have four member teams and secondary schools have six to eight member teams.
3. The teams remain constant through the first development year of the program. New members or substitutions are not added.
4. Team members should represent the make-up of the school both by grade levels and subject areas. In other words, a music or art teacher can represent the fine arts area. Guidance counselors usually make excellent team members.
5. The selection process will vary from building to building. Some school principals ask for teachers to volunteer, some ask specific teachers to participate, and in several schools the faculty voted on representatives. Nominated team members ought to be free to reject an invitation to participate. The important thing to remember is that participants need to be respected by their peers.
6. An orientation session for teachers before team selections is often helpful to the selection process.

McREL staff members can work with a maximum of fifty people in each workshop session. Usually teams represent one school district, although small districts do cooperate for joint workshop sessions.

Observers (central office staff, parents, etc.) may attend the workshop sessions if the district decision-makers want to include them. The total of fifty per session *includes* observers.

Each district must designate a contact person to coordinate the ESP locally. That person should have decision-making power and must attend all sessions, both planning and workshop sessions.

THE CONTENT (THE "WHAT")

There are five general areas which make up the topics of the team workshops. They are:

Teaching and Instruction. In this area topics are addressed which enable participants to assess their own behavior in light of the characteristics of effective classrooms as defined in the research. By becoming familiar with the research on the management of time, the organization of instruction, and the expectations communicated by teacher actions, team members realize the significant impact of teaching and instruction on student learning. Other concepts included in this area are task analysis, instructional strategies, instructional models, classroom management, student management, reinforcement, motivation, and diagnosis of student needs.

Building Level Leadership and Organization. This area draws upon the research that describes characteristics associated with school effectiveness at the building level, e.g., building leadership, school culture, school organization, building goals, collegiality and parent involvement.

Curriculum/Assessment Relationship. Key concepts in this area include test content analysis, test result analysis, curriculum alignment, textbook content analysis, test-taking skills and higher order thinking skills. Team members examine what tests measure and what test content is taught in their buildings. They also acquire skills to determine exactly what they want to teach to students, what materials should be used to accomplish this, when teaching should take place, and how to accurately measure whether students have learned what was intended.

Facilitation and Change. In this area, team members gain an understanding of their role as leaders in the planned change effort in their schools. They learn about barriers to school change, effective listening, conditions for creating change, cooperation, and collegiality. By becoming "coaches" for each other, team members model for staff members the behaviors necessary for implementing successful improvements in their buildings. The objective is to have team members realize that effective communication and collaboration are essential to school improvement.

Planning. After each leadership team has used instrumentation to gather assessment information related to their building, they develop a leadership plan. The plan specifically addresses the team's leadership role in an improvement effort by describing manageable steps to the improvement which the team facilitates in their school. The team members describe where they (and the school) are now and where they want to be one year from now. The activities which the team plans are systematically designed to provide a base for leadership decisions regarding the changes which need to occur during that year. The key issue here is that the team writes a plan for its own work, not a plan for the entire school faculty. If the team believes a building-wide, school improvement plan is important, team members design activities to include the entire faculty in the development of that plan.

Improve your school!

DYSC—Something New from the Mid-Continent Regional Educational Laboratory:
"Describing Your School's Characteristics"

DYSC is a *diagnostic self-assessment* for schools. It is based on the belief that the more educators know about themselves and their performance, the better able they are to make decisions about how to improve.

DYSC is a *measure of* administrators' and teachers' *perceptions* about what happens in a school. These perceptions are quantified and displayed as a profile to make them easier to inspect. The process of assigning numbers to perceptions does not make perceptions more accurate or a better reflection of reality, but does provide a starting point for deciding where to begin a school's improvement effort.

DYSC *was developed from research on effective schools.* It is descriptive rather than prescriptive. Generally, the characteristics assessed were true of schools which were effective in teaching all students.

DYSC is *machine scorable.* Order the number of questionnaires needed, administer them to a faculty and return them to McREL. We will send out the results within 10 days from the time we receive them. The results are accompanied by detailed explanations of the findings. DYSC cost $25 per school. For this price you will receive:

One Teacher's Version, DYSC for each faculty member for up to 30 teachers. Schools requiring more than 30 questionnaires may purchase additional forms for $.50 each.
One Administrator's Version DYSC for the school principal. Schools requiring more than one, may purchase additional forms for $1.00 each.

Instructions for administering DYSC (1 page handout)
Graphic display of school results
Item Results (9 page printout)
Interpreting Results for DYSC (6 page handout)

If you have any questions, please contact: Bob Ewy, Program Associate, 303-337-0990 or Susan Everson, Director of Field Services, 816-756-2401.